The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOLUME L. CHICAGO, ILLINOIS, FEBRUARY 29, 1908. NUMBER 9.

Original Articles

INTESTINAL TUBERCULOSIS: TUBERCULOUS INTESTINAL NEOPLASMS AND TUBERCULOUS ILEOCECAL TUMOR.

JOHN C. HEMMETER, M.D., PHIL.D., LL.D.
Professor of Physiology and Clinical Medicine, University of Maryland.
BALTIMORE.

Nowadays, as much as in the time of Socrates, a great many of the difficulties in our advancement toward truth are due to errors of conception. By the teachings of this man a school of philosophers arose—the dialecticians, who spent their lives in discussions and considerations, aiming at the most exact definitions of words and the limitations of concepts.

Neglect of exactness in defining just what is meant by certain terms in pathology renders infirm many of the statistics quoted in the literature of tuberculosis.

Human tuberculosis may assume so many different forms, its progress and terminations are so heterogeneous, that great difficulties may occasionally arise, when it becomes necessary to decide whether a given pathologic process belongs to tuberculosis or some other affection. For instance there was a temptation to class a peptic ulcer of the stomach which was found in a case of pulmonary tuberculosis at postmortem examination as a tubercular ulcer, but as it had the typical structure of a peptic ulcer it was recorded as such. If macroscopic examination showed no enteritis, ulcers, enlarged glands, no cicatrices, caseation, calcification or adhesions, all suspicious pieces of mucosa were hardened in Zenker's fluid, and after paraffin embedding, serial sections were made.

In Naegeli's 63 lethal cases of adults, the intestine was tuberculous 28 times secondarily; the mesenteric glands were affected in only 5 cases.[1] It is difficult and almost impossible to determine the portal of entry of the tubercle bacillus from the observations gained at autopsy, or even on microscopic examination.

The rare congenital cases of tuberculosis are lethal in early childhood. The demonstration of tubercle bacilli was only attempted in one-half of my cases; if the macroscopic and microscopic picture is typical of tuberculosis, the demonstration of the bacilli is unnecessary, and the eventual failure to find them would not invalidate the diagnosis, provided the histologic architecture typical of tuberculosis were found. To the experienced, the difficulty in finding tubercle bacilli in old cases of tuberculosis is well known. If the diagnosis depended solely on the demonstration of tubercle bacilli, the old and healed cases would be lost for the statistics.

Caseation in mesenteric and intestinal lymph glands can safely be classed as due to tuberculosis. Gummata and lymphosarcoma, and actinomycosis may produce a form of necrosis difficult to distinguish from tuberculous caseation macroscopically, but not difficult to distinguish microscopically. Calcification of mesenteric lymph glands has been attributed to typhoid fever by Schüppel; proof of this assertion is difficult to bring. The proof that calcification is the result of a preexisting tuberculous caseation is furnished by serial section studies of the apices of tuberculous lungs. In the lungs of tuberculous subjects dying at ages from 18 to 35, caseation predominates (bronchial glands); but in tuberculous subjects dying in the years from forty to forty-five or later, one finds, as a rule, calcification in the same regions. This indicates that calcification is a later development from preceding caseation.

In fifty-six personal studies of the intestines of persons dead from pulmonary tuberculosis, the intestines were found diseased in all. I followed very closely Naegeli's method.[2]

The following is a synopsis of the results of detailed examination of the alimentary canal, mesentery and omentum in these 56 cases. Sections were made also through lymph glands in the mesentery and retroperitoneal glands:

Tuberculous Enteritis: In 30 cases there was diffuse tuberculous enteritis or catarrh, showing unmistakable tubercle with giant cells. Among these were 4 cases that had tuberculous mesenteric glands, 4 with tuberculous retroperitoneal glands; and in 6 cases simple enteritis, jejunitis, ileitis or colitis, not showing tuberculous architecture, were found.

Tuberculous Ulcers: In 14 cases there were tuberculous ulcers of the ileum and colon; two of these 14 had cicatrices in the lower third of the ileum about 10 inches from the ileocecal valve. In these 14 cases of tuberculous ulcers there was simultaneously more or less intestinal catarrh, but not diffuse, more localized in the lower ileum. One of the patients had been operated on for fistula in ano.

Tuberculous Glands: In 10 cases there was tuberculosis either of the mesenteric, omental or retroperitoneal glands. In 6 of these, the entire intestinal mucosa was intact; in the remaining 4 of these 10 cases there was slight circumscribed catarrh, enteritis or colitis, but the histologic examination did not reveal the characteristic structure of tubercle, in pieces excised from the catarrhal area. The peritoneum was found to present minute tuberculous nodules in but two cases of the entire fifty-six.

Chronic Hyperplastic Tuberculosis of the Intestine (*Tuberculose intestinale à forme hypertrophique* of French authors): The condition of chronic hyperplastic tuberculosis was found but once by myself, during an autopsy at Bay View Asylum, Baltimore. In macroscopic and microscopic appearance this tumor corre-

1. Virch. Arch., 60, p. 465.

2. Virch. Archiv., vol. clx, p. 426.

sponded very closely to that described by Lartigau.[3] Lartigau's article contains the most important references concerning this subject (79 in all), which were obtainable at the date of that publication. It is highly probable that cases of cancer of the cecum that have been reported as cured after resection were instances of hyperplastic tuberculosis. The histologic detail and etiology are fully given in the article by Lartigau, but as the diagnosis is of importance, it will be considered in some detail in the following, which concerns more specifically the tuberculous cecal tumor, but applies also to the very closely allied condition of hyperplastic tuberculosis, for clinically and histologically they are generally inseparable.

TUBERCULOUS INTESTINAL TUMORS.

Tuberculous Cecal Tumor: It has already been stated that enlarged retroperitoneal and mesenteric tuberculous glands may simulate intestinal tumors. I wish to refer, especially, however, to the tuberculous tumor of the cecum and appendix. The cecum, on account of its position, is the most favorable location for the arrest and deposit of tuberculous products which travel down the intestinal canal. The pulmonary tuberculosis which is observed, together with this intestinal complication, is frequently insignificant. Tuberculosis of the cecum, with advanced pulmonary phthisis, is a very rare occurrence. The recognition of tuberculous neoplasms in this region is a modern diagnostic advance, and must largely be credited to abdominal surgeons. Attention was first called to it as a disease to be differentiated from carcinoma of the cecum.

Among the first to differentiate these two conditions was Durant, cited according to Conrath.[4] The fact that Durant's article was published as late as 1890 is sufficient evidence that the recognition of this condition is a very recent one. In 1891 Billroth[5] called attention to the tuberculous character of certain ileocacel tumors. Czerny,[6] König,[7] Conrath,[4] Hofmeister,[8] Hartmann and Pilliet[9] and Salzer,[10] have contributed to our knowledge of tuberculous ileocecal tumors.

Tuberculous cecal tumor may originate in two ways: (a) From the mucosa, by extensions from tubercular ulcers on the inner side of the intestinal canal, and (b) from the serosa by the extension of tubercular lymph glands. The form that originates from the mucosa represents, no doubt, an autoinfection by means of tuberculous sputa. Whether or not the tumor may arise as a primary tuberculous process from ingested tuberculous food cannot definitely be stated, and Koch's recent utterances[11] cast a doubt on this question. In most cases, the tumor results from three forms of changes incident to the tuberculous infection: (1) The inflammatory infiltration as a consequence of multiple tuberculous ulcers which (2) may lead, partly, to extensive scar formation, and, by cicatricial contraction, cause stenosis of the lumen and (3) hypertrophy of the intestinal walls as a result of the stenosis.

As to the relation of this condition to appendicitis and perityphlitis of tuberculous origin, it may be stated, briefly, that among 120 cases of perityphlitis Langfelt found that 20 were due to tuberculous processes. The chief stenosis occurs at the ileocecal valve, the folds of the valve being involved in the process. Professor W. P. Obrastzow, of Kiew,[12] calls attention to the fact that stenosis of the ileocecal valve does not always bring about a collapsed and contracted condition of the ascending colon. Theoretically, one would expect to meet with this result, and one ought to find that the ascending colon would be palpable, if at all, as a thin band or cord. In some cases, this is really the condition found on palpation, but the colon in other cases is found as a distended cylinder about five centimeters in diameter. Obrastzow attributes this distension to the production of gases from stagnating intestinal contents.

THE DIAGNOSIS OF TUBERCULOUS CECAL TUMOR.

Conrath[13] collected 85 cases, of which 65 per cent. were between the ages of twenty and forty years. In its incipiency the disease is latent; there may be constipation or constipation alternating with diarrhea. The disease is, as a rule, not recognized as serious until the symptoms of stenosis are apparent. Then follow either localized or diffused pains of an acute, colicky character. Above all, persistent constipation, nausea, vomiting and frequently visible intestinal peristalsis occur. Hemorrhage from the intestine, in the form of hemorrhagic admixtures in the stool, are rather frequent. As the disease is a complication of pulmonary tuberculosis, elevation of temperature is met with frequently.

Obrastzow, in a more recent and very scholarly contribution to the subject[14] looks upon an early and rapid development of the stenosis in the cecum as carcinomatous, and a late and slow development is considered by him as characteristic of tuberculosis. In three operated cases of carcinoma of the cecum, the stenosis developed in the course of from three to nine months from the beginning of the disease. In ten cases of tuberculosis of the cecum, the stenosis developed in the course of from three to nine months from the beginning of the disease. In ten cases of tuberculosis of the cecum, the phenomena of stenosis were at no time very pronounced.

In the differential diagnosis we must consider the possibility of : (1) Cecal carcinoma; (2) dislocated kidney; (3) fibrous appendicitis; (4) accumulated scybala in the cecum.

The differential diagnosis from cecal carcinoma is more precisely stated in the subjoined table.

From dislocated kidney, cecal tuberculosis is distinguished by the following signs: The dislocated kidney is more moveable; it gives a dull sound on percussion, and is very rarely accompanied by signs of intestinal stenosis; a diseased kidney, when affected with carcinoma, tuberculosis, gonorrheal infection or calculi, gives rise to nephralgia, pyuria, hematuria, etc. A dislocated kidney can usually be replaced into normal position.

The main supports of the diagnosis of tubercular cecal tumor are: (1) Infiltration of the walls of the cecum, which assumes the character of a tumor; (2) the presence of tubercle bacilli in the stools. In the beginning, the tumor is more or less movable, but later on it may become fixed by adhesions or contracting bands in the mesentery. The lower edge of the cecum is located one centimeter above the interspinal line in man, but when it becomes diseased by tuberculosis or carcinoma, the lower border of the cecum rises four

3. Jour. Exper. Med., vol. vi, p. 23.
4. Brun's Beitr. z. Chir., vol. xxi, No. 1, 1898.
5. Wien. med. Presse, 1891, p. 193.
6. Brun's Beitr. z. Chir., vols. vi and ix.
7. Deutsche Zeitschr. f. Chir. vol. xxxiv, 1892, p. 65.
8. Brun's Beitr. z. Chir., vol. xvii, 1896, p. 577.
9. Bull. de la Soc., anat. de Paris, 1891, p. 471.
10. v. Langenbeck's Arch., vol. xliii.
11. Congress on Tuberculosis, London, 1901.
12. Arch. f. Verdauungsk., vol. iv. p. 440, Zur Diagnose des Blinddarmcarcinoms, der Blinddarmtuberkulose., u. s. w.
13. Quoted from Hemmeter's Dis. of Intestines, vol. ii.
14. Arch. f. Verdauungsk., vol. vi, p. 23.

centimeters above the border of the linea interspinalis. In these cases, therefore, the cecum is found in the upper part of the iliac fossa, or even above the crest of the ileum. Obrastzow explains this high position of the cecum under such conditions by a shortening of the intestinal tube caused by a sclerotic process of a tuberculous nature. As a consequence of this high position of the cecum, the ileum is palpable for a considerably longer distance than it would be under ordinary conditions. Purulent disintegration of the tumor may lead to the establishing of abscesses communicating with the peritoneal cavity or adjacent organs, or it may cause a break externally causing a preternatural anus. The course is protracted, particularly as the disease is generally not recognized in its incipiency; cases have been observed that lasted three years.

Krokiewicz[15] has made extensive investigations concerning the value of the Ehrlich diazo reaction in the differential diagnosis between carcinomata and tuberculosis of the intestinal tract. According to his results, the diazo reaction is generally present with intestinal tuberculosis, but is absent in carcinoma. The diagnosis of cecal tuberculosis thus rests partially on the presence of the Ehrlich diazo reaction, together with other signs and symptoms already referred to.

The other rare conditions with which this disease might be confounded are actinomycosis, sarcoma, fibroma; foreign bodies, fecal concretions and intussusception. Scybala, or fecal concretions, are rarely found limited to the cecum. If they are present there they can be palpated throughout the colon. The only fecal concretion that could confuse the diagnosis would be one that is limited to the cecum. If necessary, the colon could be washed out by a high irrigation, which, after several repetitions, would eliminate the possibility of scybala.

The distinction from fibrinous appendicitis can frequently not be made, except by observation of the course of the disease. Improvement will follow in appendicitis of this chronic type, with a palpable induration in the right iliac fossa, on proper treatment in bed, external application of heat, counter-irritation and careful diet; but the tubercular cecal tumor will not improve under such treatment. Fibrinous appendicitis is not a concomitant of pulmonary tuberculosis, whereas the tubercular cecal tumor is always secondary to pulmonary tuberculosis.

The following schema, which is adopted from Bons' Verdauungs-Krankheiten, page 291, may serve to distinguish between carcinoma and tuberculosis of the cecum:

Cecum Tuberculosis.	Cecum Carcinoma.
Age: Between 20 and 40 years.	*Age*: Rare before fortieth year.
Duration: From 2 to 3 years.	*Duration*: Eight to nine months.
Lungs: Pulmonary tuberculosis evident more or less.	*Lungs*: Negative.
Tumor: Elongated; the intestine is palpable as an infiltrated thickened cylinder.	*Tumor*: Sharply circumscribed, intestines not palpable.
Stenosis: Always present, develops slowly, accompanied by striking, splashing and musical sounds.	*Stenosis*: Develops rapidly, acoustical signs not so pronounced.
Stool: Blood and pus rare, tubercle bacilli frequently present.	*Stool*: Blood and pus frequently observed; tubercle bacilli absent.
Fever: Generally present.	*Fever*: Exceptional.
Urine: Ehrlich's diazo-reaction positive.	*Urine*: Diazo-reaction negative.

Prognosis: This is grave under all conditions, and conditioned by the consequences of the diseases that have been described above, the principal one being stenosis, disseminated intestinal or peritoneal tuberculosis, multiple abscess formation, and amyloid degeneration of the kidneys and intestines. The pulmonary tuberculosis in itself is one which makes the outlook hopeless.

Prophylaxis: The prevention of primary local infection calls for sterilization of all food, particularly of unboiled milk, avoidance of association with tuberculous patients, particularly of tuberculous nurses in the case of children, and the avoidance of autoinfection by the swallowing of sputa. Enteritis in tuberculous individuals should be treated with great care, as the mucosa which has become diseased is more liable to tubercular infection than a healthy one.

Treatment: The treatment of tuberculous enteritis or of enteritis and colitis in tuberculous patients, even where it can not be proved to be a tuberculous infection localized in the intestine, demands a diet similar to that described in my work on "Diseases of the Intestines" for enteritis, colitis and dysentery. Strained soups, made of oatmeal, bouillon and egg, with salt, together with acorn cocoa and a little claret, should constitute the sole articles of diet for about twenty-four hours. The patient should be confined to bed. If an error of diet can be distinctly made out, a small dose of calomel, one-half of a grain, repeated every three hours, and combined with one-sixth of a grain of denarcotized extract of opium, will hasten the evacuation of the offending food.

Concerning the specific treatment of intestinal tuberculosis by tuberculin, I may say that there is no doubt that a number of patients have been cured by a cautious administration of this substance. I have personally studied the healing of a tuberculous rectal ulcer under the influence of tuberculin; nevertheless, I do not recommend the systemic employment of tuberculin in the treatment of tuberculous intestinal ulcers, enteritis, or cecal tumor, because this form of treatment has not yet been satisfactorily tested for intestinal diseases, and also because of the undesirable effects tuberculin occasionally exerts on other organs, which also demand consideration. For the diarrhea, tannigen, tannalbin, bismuth subgallate and bismuth salicylate, as well as naphthalin, have proved useful in my experience, but I must emphasize that nothing beyond a temporary relief must be expected of these remedies. The creosote preparations have, in my experience, not proved useful. The frequent eructations which creosote causes, when given in the doses recommended for these patients, reduce, rather than increase, the appetite. The only partial success in the way of treatment of tuberculous ileocecal tumor is to be expected from operation, wherever this is possible.*

PERIBRONCHIAL GLAND TUBERCULOSIS TRACEABLE TO A PRECEDING INTESTINAL INFECTION.

One of the earliest experiments showing that general infection of tuberculosis could occur by the way of the intestines as the portal of entry, and yet leave no evidence of tuberculosis in the intestines was made by

15. Wien. klin. Wochschr., 1898, No. 29.

* General tuberculous peritonitis that arises from or is consequent to tuberculosis of the cecum or appendix can not be successfully treated except by operation. In my article on "Diseases of the Gastrointestinal Tract on the Borderland Between Surgery and Internal Medicine," Med. Record, New York, Nov. 16, 1907, I present clinical records of cases of tuberculosis of the peritoneum treated by operation and others treated by conservative or expectant methods. My conclusions were that as many cases recover without operation and remain cured, as with operation. This statement can only be understood, however, when studied in connection with other facts given in this paper. The curability of tuberculosis of the peritoneum without operation does not refer to that form that arises from tuberculosis of the cecum, appendix, genitourinary organs, and direct extensions of the tuberculous process through the walls of the digestive canal. These cases require experienced diagnostic analysis and as far as can be foretold at present will continue to be the proper cases for operation.

Orth in 1886[16] The literature of this subject is given by Mazyck P. Ravenel.[17] In the light of the experiments of Ravenel, we are warranted in concluding that under certain conditions tubercle bacilli pass through the normal intestinal wall with great facility and rapidity. The most favorable condition for this to take place appears to be during the digestion of food made up largely of fat. When we remember that the chyle is carried directly into the blood stream through the thoracic duct, it is easy to understand how it is that infection through food may show itself first in the lungs, or at any rate, that the lesion in the lung may be as old as the intestinal lesion.

The claim that alimentary tuberculosis should show itself in a primary intestinal lesion is fallacious and misleading. Cats which are fed with virulent tubercle through a catheter, will in from six to ten days afterward give evidence of a tuberculous peribronchitis, in about 75 per cent of the animals infected, so that I have come to regard a peribronchial tuberculosis, without any severe lesion in the parenchyma, as an infection that has taken effect through the intestinal walls. The so-called tuberculosis pulmonum peribronchialis,[18] is due to an original infection through the alimentary canal.

Mazyck P. Ravenel[17] has demonstrated that the tubercle bacillus will pass through the stomach unscathed if it is taken into the digestive tract, mixed with food rich in fats; thus it will be able to cause intestinal infection if it is taken in a certain amount of oil.

This leads us to consider an interesting bit of pathologic physiology.

It is well known from the researches of Pawlow, that fats and oils arrest the secretion of gastric juice,[18] especially of hydrochloric acid, which is the normal disinfectant of the gastric contents; milk is chiefly an emulsion of fats, and from the studies of Pawlow we know that milk causes a less secretion of hydrochloric acid than any other food. It is, therefore, most likely to prevent the secretion of the very substance which could destroy the tubercle bacilli contained in it. For this purpose, it is advisable to recommend the use of dilute hydrochloric acid to tuberculous patients, or even to those who are not yet tuberculous when gastric secretion is impaired, in order to prevent the infection of the intestines.

The passage of tubercle bacilli through the uninjured intestinal mucosa was first demonstrated by Dobroklonski,[19] in experimental infections of rabbits. Lartigau[3] has also confirmed this statement.[20]

16. Specielle pathologische Anatomie, vol. i, p. 839.
17. Jour. of Med. Research, vol. x, 1903, p. 460.
18. Arbeit der Verdauungsdrüsen, p. 135.
19. Arch. d. med. exper. et d'anat. path., 1890, ii, p. 253.
20. In addition to the authorities cited, the following references may be consulted:
Körte: Deutsche Zeitschr. f. Chir., vol. xl, 1895, p. 523.
Eisenhart: "Ueber Häufigkeit und Vorkommen der Darmtuberculose," Diss. inaug., München, 1891.
Wittstock: "Zur Klinik des Ileus durch Darmtuberculose," Diss. inaug., Berlin, 1893.
Euttersack: "Zeitschr. f. Tuberculose u. Heilstätten Wesen," November, 1900.
Cornet, (G.): "Die Tuberculose," in Nothnagel's "Specielle Pathologie und Therapie," vol. xiv, Part II.

Successful Treatment of Muscular Contracture with Constriction Hyperemia.—Achard reported at the last French Medical Congress, October, 1907, a case of claw contracture of the hand left from tetanus following an operation for removal of a needle in the hand. He applied a constricting band to the arm, with almost immediate benefit, the contracture subsiding under five applications of the constricting band for two hours daily. By the end of two weeks normal functioning was restored.

SOME STUDIES OF THE ENDOGENOUS URIC ACID MOIETY IN PATHOLOGIC CONDITIONS.

ROBERT E. PECK, PH.B., M.D.
AND
FRANK W. THOMPSON, M.D.
NEW HAVEN, CONN.

It is now seven years since the exact origin of uric acid in man has become generally recognized, and while a large amount of work on studying the nitrogenous metabolism in normal individuals has been done, the results of investigation into metabolic processes during disease conditions are very meager and of little real value, from a scientific standpoint, because they have been carried on without reference to the character of the food ingested. We can not but feel that we must look, in the future, to the conditions of metabolic processes in functional nervous disorders and other nutritional disturbances for much aid and guidance in the diagnosis and treatment of these pathologic states, and we would like to make a plea for the more general examination of the urine and feces in the treatment of these diseases. It was with this end in view that the investigations about to be described were undertaken.

The pathology of endogenous uric acid presents a new field to work in, unencumbered by masses of literature which have to be sifted through and through to pick out that which is good. Every observation made within the next few years must of necessity be a law by itself until additional evidence is brought forward to prove or disprove the original statement.

Space will not permit of a detailed review of the work done on the subject of uric acid. The literature is abundant and voluminous and includes the studies of many brilliant scientists. We would especially commend to the reader two recent reviews, one by Chittenden[1] and another by Barker.[2]

ORIGIN OF URIC ACID.

It is now well understood that uric acid in man has its origin either from the purin bodies (xanthin, hypoxanthin, caffein, theobromin, etc.) of the ingested foods —exogenous portion—or originates within the body from the destruction of body nucleo-proteids — endogenous portion. How the uric acid is produced, and what factors determine the normal ratio between uric acid formation and uric acid destruction, are still open questions. The evidence at our command, however, points strongly toward the conclusion that there exists in certain organs of the body, notably the liver, kidneys and muscles, special enzymes or ferments which are responsible for both the formation and destruction of uric acid. Besides this a portion is probably formed synthetically.

While the exogenous uric acid, which depends on the amount of purins ingested, varies greatly from day to day, the endogenous portion, in health, should be a constant factor for each individual.

In the statistics given by Rockwood[3] and others under normal manner of living, i. e., with no special or violent exercise but, of course, on a purin-free diet, the range of urinary endogenous uric acid was from .212

1. Some Problems of Intermediary Metabolism, Boston Medical Journal, June, 1905.
2. Truth and Poetry Concerning Uric Acid, American Medical Association Press, Chicago.
3. The Elimination of Endogenous Uric Acid, Am. Jour. of Physiol., xii, p. 38.

gm. to .510 gm. in twenty-four hours. These figures represent the two extremes, the usual daily output being from .300 gm. to .400 gm. The quantity of total nitrogen eliminated ranged between 10.00 gm. and 13.86 gm.

A moment's reflection will serve to show how important these figures are in the study of uric acid metabolism in disease, for, by placing the patient on a purin-free diet, one may eliminate the exogenous uric acid factor and thus have only the more or less constant endogenous portion to deal with.

Although we do not feel that this work has been completed, for a good many points have not been cleared up to our satisfaction, yet we have concluded to report this series of experiments at this time in order to put the results on record and also to encourage further investigations along these same lines.

The problems which we have tried to solve are: What, if any, are the variations from normal in the output of urinary uric acid in pathologic conditions other than gout? What is the best method of increasing the output when it is below normal?

The clinical material for these studies was furnished from private cases of Dr. Peck, and the investigations extended over a period of more than a year. The total number of patients examined was thirty-one. In a good many instances it was impossible, owing to disinclination on the part of the patient, to collect more than one or two specimens of urine for examination, and even the results of some of these had to be discarded because the subject did not adhere strictly to the diet given.

METHODS.

In every case a purin-free diet was ordered for at least two days prior to the collection of the first sample and followed throughout the whole period of the observations. Folin's methods were used for the determination of uric acid and creatinin, and Kjeldahl's method for total nitrogen. The treatment consisted of the use of drugs, diet and electric-light-cabinet baths.

The use of the incandescent electric light in the treatment of disease conditions was first described in 1894. Since then the electric light cabinet has come into quite general use. It is usually so arranged that the patient may either sit or lie down and be subjected to the rays of light and heat of from twelve to thirty or even sixty Edison incandescent lights of varying candle-power. The cabinet used in these investigations was made in the usual form, i. e., a nearly cubical box with a round hole in the center of the top and doors so arranged that the patient can sit with his body inside and his head without. Twelve sixteen-candle-power incandescent lights were arranged with parabolic reflectors so that nearly all the light and heat rays were directed toward the patient; thus, as far as possible, every portion of the body was subjected to their influences.

The patient, after disrobing, throws a thin gauze sheet about his body, a wet turban is placed on his head, and after drinking a full glass of water he takes his place in the cabinet and the lights are turned on. With rare exceptions, perspiration begins in from seven to nine minutes, and this is allowed to continue for about a quarter of an hour. After this the patient is taken out and given a needle bath at the temperature of 100 F. gradually cooled to 85 or 80 F., and a general fan douche at the same temperature.

We have demonstrated that with the lights so arranged, at the principal focus of parabolic reflectors, one can obtain the same results from twelve sixteen-candle-power lights, as would follow the use of thirty or more of the same candle-power arranged without reflectors or with plain mirrors as is usually described. The reason for this is evident when one recalls the physical laws governing the reflection of light and heat rays.

THE EFFECTS OF HOT-AIR BATHS.

In the cases of R. E. P. and C. J. B. experiments were carried on to determine the relative effects of hot-air baths and electric-light baths on the endogenous uric acid excretion. In the case of R. E. P. three hot-air baths were given on the dates indicated in the table, with the rather unexpected and remarkable drop in uric acid output, which kept up, with the exception of one examination, for four days after treatment was discontinued. Similar results followed in the case of C. J. B. This can not be explained on the ground that the excessive perspiration produced carried off the balance, as on the days when no baths were taken the output was just as low. One conclusion drawn was that this kind of bath inhibits the formation or increases the destruction of uric acid and might be of use in conditions where abnormally high amounts of this material were present.

The electric-light bath did not have any effect when a normal amount of uric acid was being excreted, but, as will be shown, taken when there is an abnormally low output this treatment increases considerably the quantity eliminated, if not always to a normal amount.

Of the thirty-one patients examined seventeen, or 54.8 per cent., showed the urinary uric acid to be below .250 gm. in twenty-four hours. Twenty-two patients showed marked nervous symptoms, and of these in fourteen (63.6 per cent.) their condition was diagnosed as neurasthenia. Five patients showed rheumatic symptoms. Two were normal. The results of these examinations are included for purposes of comparison, as has been stated. Of the fourteen cases diagnosed as neurasthenia four patients only showed the urinary uric acid excretion above .250 gm. Of the nervous symptoms the most striking were melancholy, dizziness, blurring of vision, pains in various parts of the body, not referred to the joints but to the nerves and muscles; also pains over the eyes and in the eyeballs and back of the neck. In the five cases diagnosed as rheumatism the patient showed the usual signs of the subacute and chronic variety.

We append here the histories of a few of the cases most carefully studied. The results of the urinalysis will be found in the table.

CASE HISTORIES.

History.—M. P., aged 60, widow, no occupation. Patient first came under observation in November, 1905, complaining of nervousness; shaky, trembling feeling; general weakness; dizziness of a peculiar character in which the head felt thick, unsteady and at times an oscillation. At other times the dizziness seemed to be due to a blurring of vision; pain and soreness in the eyeballs and feeling of discomfort in the frontal region; general paresthesia. She had had a half dozen attacks in which she lost consciousness and fell to the floor or into a chair, but in only one did she have any muscular twitchings. The first of these attacks occurred in 1899. After the attacks she did not feel stupid and sleepy, but rather nervous and excited.

Examination.—This showed few objective signs; the reflexes were increased, there was some muscular weakness, pupils reacted normally, ocular excursions were normal.

Treatment.—Patient was put on tonic treatment and given general directions as to diet, etc. Conditions continued with little change except some slight improvement in general health

and strength, but the head and eye symptoms were still bitterly complained of. In July, 1906, a purin-free diet was ordered and 24-hour samples of urine examined. Patient refused to take the electric-cabinet baths which were suggested, so recourse was had to the use of drugs in our endeavor to bring the output of uric acid up to normal. This covered a period from July to the following January and consisted of several different preparations of alkaline and laxative drugs and salicylates. No improvement in the symptoms followed the use of any of these except the salicylates. Some narrowing of the right half of the visual field of the left eye was noticed at this time. In January we succeeded in getting the patient to take several electric-light baths. She began to show immediate improvement, but discontinued them after about one week because the weather became so bad that she could not call at the office for her treatments. After stopping the electric baths she soon fell back into her former condition again. In June, 1907, we again prevailed on her to take some more baths. These were followed by the same improvement as was noticed in January. In July, 1907, she consulted the same oculist who had examined her eyes about three years before. He reported that while at the former visit the retina and optic nerve looked pale and had the appearance so often seen in uric acid conditions, to-day the eye grounds were perfectly normal. Patient reported having had a very comfortable summer.

History.—C. S. P., female, aged 42, married, no occupation. Patient came under observation in May, 1906, complaining of pains in eyeballs; a feeling of sand in the eye; blurring of vision, and a feeling as if she could rub something away from them; general weakness; lack of ambition; a feeling of lassitude; easily exhausted. During past winter had had an attack of lumbago. Symptoms had been present since December, 1905. Patient consulted an oculist, who, after repeated examinations, failed to find anything in the eyes themselves to account for the symptoms. Urine showed low uric acid elimination (.123 gm. in 24 hours).

Treatment.—She was put on 5 grains of piperazine three times daily, well diluted with water. This was continued for about four weeks without apparent change in the symptoms or in the urinary constituents. Patient was kept on a purin-free diet and daily samples examined from May 3 until May 16. In June she was given six electric-light baths on dates indicated in the table. These were followed by considerable improvement in symptoms. During the summer the patient received no treatment, but lived out of doors a good deal, taking moderate exercise. She continued to feel pretty comfortable until the latter part of October, when three or four weeks after her return to the city she began to feel the old symptoms again. The electric-light baths were immediately begun and continued regularly until the latter part of December, when the patient was discharged very much improved both in regard to symptoms and higher average of uric acid and total nitrogen output.

Comments.—We would like to call attention to the amounts of uric acid eliminated during the twenty-four hours immediately following the baths, notably on June 18 and November 2, 4, 14 and 18. The patient has adhered to an almost purin-free diet since its inauguration and reports a very good summer, not having been so well in several years as at present date (September, 1907).

History.—J. W. C., aged 67, widow, no occupation. Patient had been a neurasthenic invalid for about thirty years, spending much of the time in bed prior to about twelve years ago, when she came under observation. At that time she received a course of treatment after the Weir Mitchell plan of rest cure. Since then she had been very comfortable, being able to go about and do light work around the house. For two or three months previous to November, 1906, she had complained of dizziness; objects oscillating from side to side; pains in legs, particularly along the front of the tibia; pains in the back; insomnia; general weakness; nervousness and some paresthesias.

Treatment.—The electric-light baths were begun December 10 and continued twice a week until about January 1, when they were discontinued because it was found they were too rigorous. Improvement in symptoms began soon after the first bath, the dizziness and pain in the legs entirely disappearing before the treatment was discontinued. There has been no return of symptoms to the present date. Here again we find very low endogenous urinary purin with a decided and consistent increase following the treatment. After the baths were discontinued, patient was given methyl salicylate for a period of about two months. The urine was again examined in February during this period. It is interesting to compare these results with those obtained in November and December.

History.—W. H. B., female, aged 55, married, housewife. Patient had complained of neurasthenic symptoms for several years. Her disability had never been great, but she wearied easily; was irritable, emotional, depressed and annoyed by trifles. She also complained of lameness in knees, back and back of neck and shoulder muscles; pain in occiput and extending to the vertex and forehead; knees were very sore to touch and creaked and grated when she attempted to bend them; pain in the arms at the insertion of the deltoid; finger joints also lame. No swelling or redness in any of the joints.

Examination.—This revealed the usual signs present in neurasthenia. Urinalysis showed no abnormalities, notwithstanding the fact that the joint and muscle symptoms present would lead one to suspect such changes.

TABLE SHOWING RESULTS OF ANALYSIS IN CASES STUDIED.

Patient.	Date.	Quantity in c.c.	Uric Acid, in gms.	Total N., in gms.	Creatinin in gms.	P_2O_5, in gms.	Disease.
	1906.						
M. P.	July 2	1330	.044	4.93	.904	....	Neurasthenia.
M. P.	July 3	1400	.080	3.72	.423	....	Neurasthenia.
M. P.	July 25	1800	.067	5.67	.....	....	Neurasthenia.
M. P.	July 26	900	.030	3.15	.....	....	Neurasthenia.
M. P.	July 27	1880	.070	4.50	.....	....	Neurasthenia.
M. P.	July 28	1320	.031	4.30	.....	....	Neurasthenia.
M. P.	Aug. 5	1810	.039	4.90	.....	....	Neurasthenia.
M. P.	Aug. 6	880	.038	4.76	.....	....	Neurasthenia.
M. P.	Aug. 19	1000	.168	5.31	.....	....	Neurasthenia.
M. P.	Aug. 20	1850	.068	4.23	.....	....	Neurasthenia.
M. P.	Oct. 8	1220	.160	3.42	.....	....	Neurasthenia.
M. P.	Oct. 9	1050	.078	4.83	.....	....	Neurasthenia.
M. P.	Nov. 5	1230	.221	5.16	.....	....	Neurasthenia.
M. P.	Nov. 6	1050	.147	5.04	.....	....	Neurasthenia.
M. P.	Nov. 7	980	.120	4.55	.....	....	Neurasthenia.
M. P.	†Nov. 8	1010	.151	4.24	.....	....	Neurasthenia.
M. P.	Nov. 9	620	.136	4.09	.....	....	Neurasthenia.
M. P.	†Nov. 10	1000	.112	4.00	.....	....	Neurasthenia.
M. P.	Nov. 11	580	.150	2.55	.....	....	Neurasthenia.
M. P.	Nov. 12	1620	.178	7.12	.....	....	Neurasthenia.
M. P.	†Nov. 13	1400	.135	4.43	.....	....	Neurasthenia.
M. P.	Nov. 14	830	.103	2.98	.....	....	Neurasthenia.
M. P.	†Nov. 15	670	.100	3.61	.....	....	Neurasthenia.
M. P.	Nov. 16	490	.088	2.35	.....	....	Neurasthenia.
M. P.	Nov. 18	1230	.151	2.95	.....	....	Neurasthenia.
M. P.	Nov. 19	260	.058	1.14	.....	....	Neurasthenia.
M. P.	Nov. 20	1190	.178	2.38	.....	....	Neurasthenia.
M. P.	Nov. 21	800	.207	2.67	.....	....	Neurasthenia.
M. P.	Nov. 22	850	.204	2.21	.....	....	Neurasthenia.
M. P.	Dec. 17	1480	.194	6.00	.....	....	Neurasthenia.
M. P.	Dec. 18	1030	.081	3.02	.....	....	Neurasthenia.
	1907.						
M. P.	June 5	675	.111	1.32	.....	0.46	Neurasthenia.
M. P.	June 20	1040	.179	3.93	.....	0.62	Neurasthenia.
M. P.	June 21	740	.133	2.49	.....	0.39	Neurasthenia.
M. P.	June 22	1530	.258	5.03	.....	1.24	Neurasthenia.
M. P.	June 23	1020	.180	4.14	.....	0.73	Neurasthenia.
M. P.	June 27	1520	.243	4.53	.....	1.38	Neurasthenia.
M. P.	June 28	730	.244	3.83	.....	0.73	Neurasthenia.
	1906.						
C. S. P.	April 30	1570	.123	.....	.638	....	Neurasthenia.
C. S. P.	May 4	1450	.206	8.26	1.085	....	Neurasthenia.
C. S. P.	May 5	2170	.195	7.78	1.124	....	Neurasthenia.
C. S. P.	May 6	1350	.130	.....	.....	....	Neurasthenia.
C. S. P.	May 7	1605	.210	9.30	6.350	....	Neurasthenia.
C. S. P.	May 8	1200	.117	6.13	6.770	....	Neurasthenia.
C. S. P.	May 9	1480	.108	6.09	.875	....	Neurasthenia.
C. S. P.	May 10	1550	.210	6.72	2.170	....	Neurasthenia.
C. S. P.	May 11	1250	.175	6.71	1.200	....	Neurasthenia.
C. S. P.	May 12	1900	.064	7.71	2.660	....	Neurasthenia.
C. S. P.	May 13	2030	.065	5.96	3.800	....	Neurasthenia.
C. S. P.	May 14	1510	.196	6.97	1.350	....	Neurasthenia.
C. S. P.	May 15	1260	.220	5.97	1.200	....	Neurasthenia.
C. S. P.	May 26	1100	.215	6.00	.649	....	Neurasthenia.
C. S. P.	May 27	1220	.238	6.83	.395	....	Neurasthenia.
C. S. P.	June 18	1520	.165	7.44	1.714	....	Neurasthenia.
C. S. P.	†June 19	880	.320	6.43	1.073	....	Neurasthenia.
C. S. P.	Oct. 19	1740	.017	7.65	.....	....	Neurasthenia.
C. S. P.	†Oct. 30	1350	.151	9.40	.....	....	Neurasthenia.
C. S. P.	Oct. 31	1290	.204	9.03	.....	....	Neurasthenia.
C. S. P.	†Nov. 1	1360	.306	7.61	.....	....	Neurasthenia.
C. S. P.	Nov. 2	1170	.175	5.89	.....	....	Neurasthenia.
C. S. P.	†Nov. 3	1830	.351	8.65	.....	....	Neurasthenia.

Patient.	Date.	Quantity in c.c.	Uric Acid, in gms.	Total N., in gms.	Creatinin in gms.	P_2O_5, in gms.	Disease.
C. S. P.	Nov. 4	1410	.236	5.64	.....	....	Neurasthenia.
C. S. P.	Nov. 5	1180	.199	5.66	.....	....	Neurasthenia.
C. S. P.	†Nov. 6	1110	.107	4.88	.....	....	Neurasthenia.
C. S. P.	Nov. 7	1380	.207	4.96	.....	....	Neurasthenia.
C. S. P.	†Nov. 8	1220	.136	3.90	.....	....	Neurasthenia.
C. S. P.	Nov. 9	1160	.129	5.10	.....	....	Neurasthenia.
C. S. P.	†Nov. 12	1390	.194	5.28	.....	....	Neurasthenia.
C. S. P.	†Nov. 14	1530	.252	6.00	.....	....	Neurasthenia.
C. S. P.	Nov. 15	910	.195	5.64	.....	....	Neurasthenia.
C. S. P.	Nov. 16	1690	.185	6.76	.....	....	Neurasthenia.
C. S. P.	Nov. 17	1570	.152	5.96	.....	....	Neurasthenia.
C. S. P.	†Nov. 18	1380	.234	6.34	.....	....	Neurasthenia.
	1906.						
J. W. C.	Nov. 27	730	.094	5.40	.....	....	Neurasthenia.
J. W. C.	Nov. 28	960	.096	6.72	.....	....	Neurasthenia.
J. W. C.	Nov. 29	1020	.069	4.07	.....	....	Neurasthenia.
J. W. C.	†Dec. 10	1510	.142	5.93	.....	....	Neurasthenia.
J. W. C.	Dec. 11	600	.083	4.83	.....	....	Neurasthenia.
J. W. C.	†Dec. 12	910	.147	4.18	.....	....	Neurasthenia.
J. W. C.	Dec. 13	650	.129	3.40	.....	....	Neurasthenia.
J. W. C.	†Dec. 14	1220	.157	5.19	.....	....	Neurasthenia.
J. W. C.	Dec. 15	950	.249	5.51	.....	....	Neurasthenia.
J. W. C.	Dec. 17	530	.243	5.18	.....	....	Neurasthenia.
J. W. C.	†Dec. 18	530	.084	4.63	.....	....	Neurasthenia.
J. W. C.	Dec. 19	750	.183	4.62	.....	....	Neurasthenia.
J. W. C.	Dec. 20	1320	.237	6.46	.....	....	Neurasthenia.
J. W. C.	Dec. 21	950	.139	4.99	.....	....	Neurasthenia.
J. W. C.	†Dec. 22	670	.294	4.50	.....	....	Neurasthenia.
J. W. C.	Dec. 23	750	.236	5.35	.....	....	Neurasthenia.
J. W. C.	Dec. 24	1090	.268	7.63	.....	....	Neurasthenia.
	1907.						
J. W. C.	Feb. 9	590	.141	7.83	.....	....	Neurasthenia.
J. W. C.	Feb. 10	790	.140	.....	.....	....	Neurasthenia.
J. W. C.	Feb. 11	930	.046	.....	.....	....	Neurasthenia.
J. W. C.	Feb. 12	1220	.109	.....	.....	....	Neurasthenia.
J. W. C.	Feb. 13	900	.117	.....	.....	....	Neurasthenia.
J. W. C.	Feb. 14	1330	.146	.....	.....	....	Neurasthenia.
J. W. C.	March 3	1200	.315	5.15	.....	....	Neurasthenia.
	1906.						
W. H. B.	Dec. 19	910	.373	9.55	.....	....	Neurasthenia.
	1907.						
W. H. B.	Jan. 27	1060	.318	.....	.....	....	Neurasthenia.
W. H. B.	Jan. 28	1780	.314	.....	.....	....	Neurasthenia.
W. H. B.	Jan. 29	1240	.307	.....	.....	....	Neurasthenia.
W. H. B.	Jan. 30	1010	.250	.....	.....	....	Neurasthenia.
W. H. B.	Jan. 31	1520	.251	.....	.....	....	Neurasthenia.
W. H. B.	Feb. 1	940	.370	.....	.....	....	Neurasthenia.
W. H. B.	Feb. 2	980	.272	.....	.....	....	Neurasthenia.
W. H. B.	Feb. 3	920	.308	.....	.....	....	Neurasthenia.
W. H. B.	Feb. 4	1190	.299	.....	.....	....	Neurasthenia.
	1906.						
H. C. S.	Nov. 19	990	.108	7.52	.....	....	Neurasthenia.
H. C. S.	†Dec. 7	870	.296	6.40	.....	....	Neurasthenia.
H. C. S.	†Dec. 8	620	.206	5.20	.....	....	Neurasthenia.
H. C. S.	†Dec. 10	810	.194	5.10	.....	....	Neurasthenia.
H. C. S.	†Dec. 11	1140	.269	5.18	.....	....	Neurasthenia.
H. C. S.	†Dec. 12	660	.042	4.71	.....	....	Neurasthenia.
H. C. S.	†Dec. 13	580	.060	6.09	.....	....	Neurasthenia.
H. C. S.	†Dec. 14	850	.143	5.65	.....	....	Neurasthenia.
H. C. S.	†Dec. 15	1160	.348	5.50	.....	....	Neurasthenia.
H. C. S.	†Dec. 16	600	.245	5.24	.....	....	Neurasthenia.
H. C. S.	†Dec. 17	780	.366	5.28	.....	....	Neurasthenia.
	1906.						
P. R.	July 19	700	.560	9.24	.....	....	Neurasthenia.
P. R.	July 20	650	.378	5.23	.708	....	Neurasthenia.
P. R.	Aug. 19	830	.311	.....	.....	....	Neurasthenia.
P. R.	Aug. 20	800	.330	.....	.....	....	Neurasthenia.
P. R.	Nov. 7	1580	.442	7.16	.....	....	Neurasthenia.
	1906.						
F. A. P.	June 2	1600	.041	7.73	1.040	....	Neurasthenia.
F. A. P.	June 3	1620	.328	7.03	.696	....	Neurasthenia.
F. A. P.	June 29	1290	.150	7.76	.786	....	Neurasthenia.
F. A. P.	June 30	1270	.357	10.66	.558	....	Neurasthenia.
	1907.						
W. H. H.	Jan. 10	740	.111	6.21	.....	....	Neurasthenia.
W. H. H.	Jan. 11	370	.046	6.35	.....	....	Neurasthenia.
W. H. H.	Feb. 13	580	.093	6.42	.....	....	Neurasthenia.
	1906.						
Wm. H. W.	Aug. 16	1080	.101	5.43	.....	....	Neurasthenia.
Wm. H. W.	Aug. 17	1620	.059	4.93	.....	....	Neurasthenia.
	1906.						
W. W. J.	Aug. 17	700	.291	7.10	.....	....	Neurasthenia.
W. W. J.	Aug. 18	800	.188	7.40	.....	....	Neurasthenia.
	1906.						
M. M.	Nov. 21	1350	.190	10.60	.....	....	Neurasthenia.
M. C. D.	Dec. 4	1100	.132	2.31	.....	....	Neurasthenia.
O. C.	Nov. 5	750	.376	7.42	.....	....	Neurasthenia.
C. J. M., Jr.	Nov. 4	990	.630	7.92	.....	....	Neurasthenia.
J. G. S.	June 3	1080	.055	10.13	5.94	....	Subac. rheum.
J. G. S.	†June 4	1100	.049	6.08	6.05	....	Subac. rheum.
J. G. S.	June 15	1340	.489	9.00	.....	....	Subac. rheum.
J. G. S.	June 16	1200	.450	9.80	.....	....	Subac. rheum.
M. A. H.	June 27	410	.353	3.09	.250	....	Subac. rheum.
M. A. H.	June 28	340	.178	3.07	.353	....	Subac. rheum.
M. A. H.	July 27	780	.179	6.09	.343	....	Subac. rheum.
M. A. H.	July 28	650	.262	5.91	.507	....	Subac. rheum.

Patient.	Date.	Quantity in c.c.	Uric Acid, in gms.	Total N., in gms.	Creatinin in gms.	P_2O_5, in gms.	Disease.
J. W. M.	June 30	700	.420	8.33	1.071	....	Myalgia.
J. W. M.	July 3	1190	.350	9.57	1.291	....	Myalgia.
H. E. S.	June 27	540	.451	9.86	.972	....	Subac. rheum.
H. E. S.	June 29	480	.478	6.72	.960	....	Subac. rheum.
A. H. L.	Oct. 8	1730	.290	9.34	.....	....	Subac. rheum.
A. H. L.	Oct. 9	1540	.489	10.16	.....	....	Subac. rheum.
G. A.	July 17	1860	.530	12.36	1.131	....	Melancholia.
G. A.	July 19	1690	.541	12.53	1.012	....	Melancholia.
M. W.	Dec. 19	1020	.237	.....	.....	....	Melancholia.
	1907.						
E. G.	Jan. 4	1210	.418	.....	.....	....	Melancholia.
R. N. H.	Oct. 10	1450	.435	11.31	.....	....	Autointox.
E. S. M.	Nov. 15	1500	.117	3.15	.....	....	Autointox.
E. S. M.	Dec. 8	1290	.619	10.25	.....	....	Autointox
E. S. M.	Dec. 10	1800	.547	11.34	.....	....	Autointox.
E. S. M.	Dec. 11	2030	.471	10.20	.....	....	Autointox.
E. S. M.	Dec. 12	1210	.652	9.72	.....	....	Autointox.
E. S. M.	Dec. 13	1680	.554	8.93	.....	....	Autointox.
E. S. M.	Dec. 14	1360	.632	7.87	.....	....	Autointox.
E. L. S.	Nov. 27	1330	.252	7.04	.....	....	Autointox
E. L. S.	Nov. 28	1020	.142	4.07	.....	....	Autointox.
E. L. S.	Nov. 29	1320	.132	4.92	.....	....	Autointox.
D. R.	Aug. 3	630	.224	.....	.....	....	Autointox.
C. S. A.	Oct. 7	1000	.525	10.40	.....	.....	Debility.
E. G. M.	Oct. 11	1030	.396	10.10	.....	....	Anemia.
A. M. E.	July 26	1150	.322	8.13	1.127	....	Nephritis.
A. M. E.	July 27	1130	.384	7.91	1.107	....	Nephritis.
A. M. E.	Aug. 14	1030	.269	.....	.....	....	Nephritis.
A. M. E.	Aug. 15	1200	.238	.....	.....	....	Nephritis.
A. M. E.	Oct. 7	1750	.143	9.80	.....	....	Nephritis.
	1907.						
A. M. E.	Jan. 6	1340	.452	10.70	.....	....	Nephritis.
A. M. E.	Jan. 7	530	.235	7.50	.....	....	Nephritis.
F. B. T.	April 28	510	.157	5.36	.605	....	P. Neuritis.
F. B. T.	April 29	670	.289	6.23	.711	....	P. Neuritis.
F. B. T.	April 30	560	.099	4.31	.533	....	P. Neuritis.
F. B. T.	May 1	850	.140	4.87	.659	....	P. Neuritis.
F. B. T.	†May 2	440	.115	3.42	.403	....	P. Neuritis.
F. B. T.	May 3	600	.164	.....	.605	....	P. Neuritis.
F. B. T.	†May 4	740	.147	4.70	.597	....	P. Neuritis.
F. B. T.	May 5	810	.209	5.53	.684	....	P. Neuritis.
F. B. T.	†May 8	870	.101	4.50	.675	....	P. Neuritis.
F. B. T.	May 9	620	.253	5.82	.596	....	P. Neuritis.
F. B. T.	May 14	740	.267	5.86	.....	....	P. Neuritis.
	1906.						
R. E. P.	June 22	1330	.478	11.17	1.303	....	Normal.
R. E. P.	June 23	1500	.321	11.02	1.470	....	Normal.
	1907.						
R. E. P.	Jan. 13	1150	.299	8.85	.....	....	Normal.
R. E. P.	Jan. 14	1010	.202	7.77	.....	....	Normal.
R. E. P.	Jan. 15	830	.224	7.37	.....	....	Normal.
R. E. P.	Jan. 16	1270	.254	8.43	.....	....	Normal.
R. E. P.	Jan. 17	1110	.252	9.36	.....	....	Normal.
R. E. P.	*Jan. 18	1330	.255	9.16	.....	....	Normal.
R. E. P.	Jan. 19	1320	.184	11.16	.....	....	Normal.
R. E. P.	*Jan. 20	1080	.118	7.25	.....	....	Normal.
R. E. P.	Jan. 21	1450	.101	7.06	.....	....	Normal.
R. E. P.	*Jan. 22	730	.131	7.81	.....	....	Normal.
R. E. P.	Jan. 23	920	.322	9.53	.....	....	Normal.
R. E. P.	Jan. 24	1220	.153	10.66	.....	....	Normal.
R. E. P.	Jan. 25	1470	.220	9.46	.....	....	Normal.
R. E. P.	Jan. 26	770	.130	7.05	.....	....	Normal.
R. E. P.	Jan. 27	1090	.359	10.28	.....	....	Normal.
R. E. P.	Jan. 28	1340	.361	10.98	.....	....	Normal.
R. E. P.	†Jan. 29	1070	.299	9.35	.....	....	Normal.
R. E. P.	Jan. 30	1040	.343	8.88	.....	....	Normal.
R. E. P.	†Jan. 31	1650	.264	9.77	.....	....	Normal.
R. E. P.	Feb. 1	1690	.270	8.98	.....	....	Normal.
R. E. P.	†Feb. 2	1180	.271	8.84	.....	....	Normal.
R. E. P.	Feb. 3	1330	.292	10.60	.....	....	Normal.
R. E. P.	Feb. 4	1390	.210	12.20	.....	....	Normal.
R. E. P.	Feb. 5	1220	.319	10.00	.....	....	Normal.
	1907.						
C. J. B.	June 13	1280	.461	11.83	.....	1.95	Normal.
C. J. B.	*June 14	870	.453	11.08	.....	1.95	Normal.
C. J. B.	June 15	660	.449	11.37	.....	2.63	Normal.
C. J. B.	*June 16	680	.439	11.42	.....	1.71	Normal.
C. J. B.	June 17	680	.403	11.40	.....	1.71	Normal.
C. J. B.	*June 18	650	.415	10.05	.....	1.73	Normal.
C. J. B.	June 20	740	.366	11.81	.....	1.98	Normal.

* Hot-air cabinet bath. † Electric-light cabinet bath.

The most striking feature of these results is the large number, 54.8 per cent., of the cases in which the excretion of uric acid by the kidneys was below .250 gm. Accompanying this condition are a large number of symptoms, principally of a nervous character, which were wholly or in part relieved when the uric acid was brought up to the normal mark, that is, .300 gm. or over. It seems fair then to draw the inevitable conclusion that in a large number of cases which we are in the habit of diagnosing as neurasthenia the disturbances in metabolism are of such a nature as to lead to a

marked diminution in the output of endogenous uric acid in the urine.

That the presence of an excess of purin bodies in the human system is accompanied by symptoms of disturbed function is attested by the words of Walker Hall.[4] He says:

> At present there is a tendency to disregard the action of the oxypurins on the tissues, but it must be remembered that when they are in excess they probably form unusual combinations and that such products may act as irritants. When Kochmann added carbohydrate food to the meat diet, his dogs presented few postmortem pathologic changes. Up to the present date I have made a large number of personal experiments, and when I have taken large doses of purin bodies, such as ½ gm. of hypoxanthin, 1 to 5 gm. of guanin, 0.5 to 1 gm. of uric acid—apparently associated symptoms of general malaise and irritability have frequently appeared.

Hoslin and Dercum state that there is an excess of uric acid very uniformly in neurasthenia and that this uric acid results from a breaking down of the nuclei of cells, especially nerve cells. Herter says that there are few cases of neurasthenia which do not show some defective metabolism in urine and feces and that the twenty-four-hour amount is generally below normal, showing low specific gravity.

It has been shown by feeding experiments with meats (beef, fish and fowl), haricot beans and beer that under appropriate conditions the urinary purins, principally as uric acid, are increased and the increase corresponds to 50 to 60 per cent. of the purin bodies ingested. The remaining 50 per cent. is excreted as urea and intermediate bodies between uric acid and urea. It is fair to assume that the endogenous purin portion may behave similarly and that 50 per cent. appears as urinary uric acid. Inasmuch as the endogenous uric acid is derived in part from the leucocytes, but mostly from the cleavage of cell nuclei, and as the cell-nucleus dominates the cell activity, the urinary uric acid indicates the extent of the metabolic processes and in turn the functional activities of the cells.

Obviously, considering the present state of our knowledge, it is impossible to draw definite conclusions as to just the character of the pathologic changes that have been operative in the cases described, i. e., whether there is increased formation with retention or increased destruction of uric acid.

The striking feature in the majority of the cases is the abnormally low output of endogenous uric acid, and in most cases total nitrogen also. With the return to normal of the urinary constituents the symptoms complained of were improved; therefore it seems justifiable to say that some interference with endogenous uric acid metabolism was the cause. If this is admitted we must grant that a certain percentage of cases diagnosed as neurasthenia have a well defined pathologic condition (low endogenous uric acid output), causing their symptoms. On the other hand, the metabolic disturbances may result from the general asthenia, but we are inclined to the former belief, viz., that the metabolic anomalies are primary. If this be true one can not emphasize too strongly the importance of the so-called rational therapeutic plan of treating this class of cases, i. e., by hydrotherapy, massage, properly regulated exercise and diet.

SYMPTOMS.

The symptoms complained of might be divided into two classes:

1. *Toxic:* Due to deleterious substances formed from products of imperfect metabolism, circulating throughout the system. Under this heading would be classed headache, dizziness, gastrointestinal disturbances, blurring of vision and other eye symptoms.

2. *Mechanical:* Due to direct irritation of nerve endings by pathologic products, causing muscle and joint pains.

The explanations of the etiologic factor and symptoms naturally go together. If we accept the theory that uric acid is formed by a series of steps from xanthin bases by enzymatic action and as a product of normal muscle metabolism, through the action of these enzymes, which are found in muscles and other organs, it would follow that any failure on the part of one or more of these ferments to do their work would result in throwing the process of normal metabolism out of order, with the formation of products which should not be present. As it has been shown lately that muscular action plays a considerable part in uric acid formation, it would follow that a good many of these abnormal products would be present in the muscles themselves, which seems probable from the nature of the symptoms complained of. Again, if there was a break in the chain of enzymes which go toward forming endogenous uric acid, this product would be diminished, which by the results obtained is found to be the case. On the other hand, there is also the possibility that the uric-acid-destroying ferment might be over active and destroy more than its normal amount and thus lead to the abnormally low urinary uric acid.

If one is not quite ready to accept the enzymatic theory for the formation and destruction of uric acid, there is the one advanced by Gotto.[5] In this case a normal amount of uric acid might be formed, but owing to excessive amount of combination with organic substances an abnormally low endogenous uric acid would be found present in the urine. This pathologic retention could easily explain the symptoms, especially when nodules were formed.

The blood in health does not apparently contain uric acid, but its presence in certain pathologic conditions has been fully demonstrated by Salomon, Klemperer, v. Jaksch, Garrod and others. If it is present it may escape detection owing to its combination with certain organic substances, and the symptoms may not be due so much to the quantity as to the character of the combination.

In the cases of neurasthenia given it is interesting to note that the majority come between the ages of 50 and 70 years, while all except one are females. These few cases are, however, not of a sufficiently large number to draw positive conclusions from. Before the exact percentage in which low endogenous uric acid is present can be accurately determined a large number of patients will have to be examined.

The drugs used in the treatment of these cases, with the possible exception of methyl salicylate, had no effect on raising the low endogenous uric acid. This is in a way confirmatory of the results obtained by other investigators, as is shown by a table given by Hall.[4] By reference to this table it will be seen that sodium salicylate is the only drug which gave a marked increase in urinary purin. Most of these results were obtained by experiments conducted either on a mixed or a vegetable diet or with nitrogenous equilibrium, but not a purin-

4. Purin Bodies, p. 78.

5. Ueber die Lösung der Harnsäure durch Nukleinesäure Ztschr. f. physiol. Chem., xxx, 1900, p. 473.

free diet, so that the results are misleading, because one can not tell whether, as Hall points out, the increase is due to an increased destruction of the exogenous moiety or decreased formation of the endogenous purins.

The most satisfactory form of treatment seems to have been the electric-light baths, alone with general dietetic and hygienic measures. With this method of treatment an increase of the output of uric acid was brought about in every instance, even amounting to the normal quantity in some cases. The increase is very striking on the day of the bath in a number of the cases (see table). With this return to normal the symptoms improved or entirely disappeared with the return of health to the patient.

That the dietetic and hygienic treatment was not alone responsible for the improvement is proven by the fact that this increase did not appear until after the baths were commenced, although these measures were instituted when the patient first came under observation.

SUMMARY.

To summarize briefly the results of these investigations:

1. A certain proportion of patients showing nervous and other symptoms are suffering from disturbances of metabolism of such a nature as to lead to an abnormally low output of endogenous urinary purins.

2. Just what these metabolic abnormalities are we can not at present state, because of ignorance of the exact physiologic processes concerned in the formation of the endogenous moiety, but that they are, in a measure at least, responsible for some of the symptoms is shown by the relief of these same symptoms on increasing the elimination of the urinary purins.

3. The best method of bringing about this result is not by trying to dissolve the uric acid, as has been our endeavor in the past, but to increase the activity of the metabolic processes. This latter accomplishment is best attained by exposing the naked body to the direct rays of incandescent electric lights.

OPERATIVE PROCEDURE AS A THERAPEUTIC MEASURE IN THE CURE OF EPILEPSY.

A PLEA FOR A MORE FREQUENT SURGERY.*

MATTHEW WOODS, M.D.
PHILADELPHIA.

In this paper I use the word "surgery" in its abstract sense, not concretely or connected with sensible objects or in its specific relation to definite things, as the amputation of a limb, the incision of an abscess or removal of a tumor, but rather the impression made on the mind, nervous system and emotions by the immaterial concomitants of the surgical act, as well as the act itself—the combination of hope, fear, expectancy, dread—the impressions and experiences connected with anesthesia, the sinking thought of passing through it into annihilation and nothingness, and all the other feelings of depression and momentary exhilaration known to us who have had personal operative experience.

These things, these mostly emotional things, I believe are the cause at times of recovery from epilepsy, and may thus be regarded therapeutically because they cure just as drugs cure other diseases.

My purpose, then, is to point out that occasionally it may be the conditions connected with surgery—shock when it occurs, impressions on the nervous system, disturbances of vasomotor equilibrium and the like, rather than anything definite that surgery does that causes suspension of epileptic seizures, and that the recovery following surgical operations is not necessarily due to the tangible thing that has either been removed or corrected.

Some patients get well spontaneously; others after removal of the exciting cause, although this is not always the case. In certain persons—apparently acquiring the epileptic habits, as has been said, as a consequence of traumatism, tumor or other neoplasm—the convulsive tendency remains in spite of everything. Cures also are effected by the combined influence of drugs, diet and tranquility; by inducing by ligation an interruption of nervous energy between the skin and nerve centers; in cases of peripheral irritation by removing the exciting cause, etc., yet there is still a considerable number of cures that can not be accounted for except in the way indicated above.

It is probably because of these impressions on the entire system that sometimes, after almost any operation, the convulsions are absent for several months. Even in cases where operations done for other diseases are followed by incidental recovery from epilepsy, such recovery can not always be accounted for by the theory that some cause or source of reflex irritation had been unknowingly cut out or corrected by the operation, as this would be like justification for the ploughing of a field for hidden treasure not likely to be found.

The absence, as far as we know, of a uniform exciting pathology, to be sure, makes anything but conjecture impossible, yet the above hypothesis would seem to explain many otherwise inexplicable restorations. This is the reason for the faith that is in me, not about the cases in which surgery is the only remedy, but in regard to the occasional efficacy of surgery *per se*, so that in otherwise incorrigible cases, after drugs and hygiene under capable hands have failed to produce satisfactory results, on the slightest prospect of recovery, if there is anything at all demanding an operation, I resort to surgery in hope of possible deliverance. Formerly justifiable operations for the cure of epilepsy were limited, by most people, to such conditions as fracture of the skull, with depression, etc., lesions of the brain or nervous system, or where the character of the convulsion indicated the presence of irritation in some specific region, which sometimes seems to bear the same relation to the convulsions that the button bears to the bell—press the button, the bell rings at the other end. Now I at least fell that surgical procedure for almost anything may cause either improvement or recovery, and that an operation for an ingrowing toenail may be as much of a benefit as one for the removal of a tumor from the brain.

The following line of reasoning may sustain my theory: Epilepsy is an apyretic paroxysmal neurosis, its victims neurotics, hence easily impressed. Neuroses constitute the only class of diseases caused and cured by emotional excitement, or psychically and the like, as witness epileptic and asthmatic attacks and paroxysms of dyspnea, excited in neurotics and others by odors, sights and apprehensions, excessive secretion of gastric juice by the blowing of a trumpet, involuntary micturition by the squeaking of a bagpipe. Or again, witness the cures effected on the neurotic by the laying on of hands, the royal touch, by visits to shrines, pilgrimages

* Read before the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, at Richmond, Va., Oct. 24, 1907.

to sacred places; by Christian Science, mental healing, cures affected on the tarantati by the tarantella dance,[1] or again ecchymoses—actual rupture of capillaries and other blood vessels in specific locations—caused by fright or faith acting on an anxious imagination. The communication of the stigmata is an ecclesiastical illustration, said to be supernaturally impressed on the bodies of certain people in imitation of the wounds on the body of Jesus, such as the stigmata of St. Francis, or, again, the deaf hearing, the lame walking, the dumb speaking, the blind restored to sight occasionally, even in our own matter-of-fact, everyday practice, in consequence of emotions and experiences made by conditions connected with certain acts.

These various illustrations of the phenomena of disease accepted as realities are so incapable of explanations founded on visible pathology that in accepting these we do not need to doubt the possibility of an epilepsy, a disease belonging to the same type once in a while being cured in the same way.

Dr. William Carpenter, in his "Mental Physiology," a book that ought to be in the library of every physician, says that so many mysterious things occur within the little universe of man, so impossible of logical elucidation, that the educated person is not in a position to refuse belief in anything.

There are so many cases of recovery from epilepsy following operations, for example, for the relief of cerebral tension, when there was no tension, and the amputation of such parts as we know now had no connection with the cause of the disease, that I know of no other explanation except the one I have adduced.

Take the following illustrations from my own case-book:

CASE 1.—Mrs. B., wife of a druggist, aged 42, had been an epileptic for twenty years, convulsions for the last year averaging six monthly. For three months she had been taking bromid of potassium, 20 grs. 3 times daily in 4 ounces of water; hydrocyanate of iron 1 gr. 3 times daily, with restricted diet. During absence of the cook, Mrs. B., had temporarily assumed her place at the kitchen range. Breakfast being delayed, her son entered the kitchen and found his mother in a convulsion, the first one in ten weeks, with her charred hand rubbing against the bars of a red-hot grate. An amputation under ether was done, and until her death, eight years after, she was free from convulsions, although treatment with epileptic medicine after three weeks interruption, lasted only for a month after the recovery from the operation.

CASE 2.—Louise X., aged 12, an epileptic since her second year, with convulsions averaging for the past year, twelve monthly. She had been under my care three months, during which time she had had but one convulsion. Treatment was bromid of strontium, 6 grs. four times daily in 4 ounces of water. Infusion of digitalis a teaspoonful three times daily on alternate days, with restricted diet, and protection from excitement. After a bath on a hot summer day her nurse placed her on a slipper box in front of an open third story window, went into an adjoining room for fresh clothing, and when she returned the naked child had disappeared through the opening, falling with such force on a wooden fence as to break it. An hour later I found her on a sofa in the parlor, excited, confused, with a deep laceration on the outer surface of her left thigh about 4 inches long, which, after washing and being brought together with stitches, under ether, she was put to bed. There were no broken bones. Until the family left the city four years after, the child was free from convulsions, the accident leaving no result except a scar.

CASE 3.—Margaret C., aged 9, an epileptic since her second year, with an average of three fits monthly, convulsions slight, short, almost psychic. She was but slightly benefited by a treatment of bromid of strontium and infusion of digitalis, and adapted diet, and the treatment became frequently interrupted and finally was suspended altogether. Two years after, she returned with the spells more frequent, but with a bunch of tuberculous glands in the right surgical triangle entending up toward the ear. Three years after their extirpation under ether she is still exempt from convulsions and is entirely normal. In this case no epileptic medicine was given after operation.

It is such cases as these and others somewhat similar that have convinced me of the occasional benefit of almost any kind of surgery in epilepsy. The combined concomitants of the operation, its awe, impressiveness and solemnly, as well as the act itself, acting psychically on temperaments or minds specially susceptible, as in the historic cases mentioned in the beginning of my paper. I think this interpretation may be applied also to many of the cures effected under the direction of Brown-Séquard, and that his claim of the removal of "peripheral irritation" could not now be applied to many of them.

The same may be said of the numerous cures claimed by the advocates of the once popular Corsican remedy—cauterization with a red hot iron behind the ears. This popular site of reflex agitation, then, could hardly, like the residence of an exiled prince, have been relegated by the medical powers that be, to some more remote location. Fashions may influence diagnosis but not pathology.

I think the same analysis may be applied to the many cases reported by Baker Brown, M.R.C.S. Indeed, this surgeon was so successful in producing recoveries in epilepsy that his society, the Royal College of Surgeons, thought he was getting up a corner in cures and disciplined him. Mr. Brown was convinced by Brown-Séquard's "Lectures on the Physiology and Pathology of the Nervous System" and his theory of peripheral irritation that great mischief was caused to the system in general, and the nervous system in particular, by such excitement. He decided consequently that epilepsy was due to "storm" of the "pudic nerve," mechanically induced or rather that branch of it supplying the clitoris.

Subcutaneous division of the nerve not being sufficient to effect a cure, Mr. Brown finally subjected his deduction to a more heroic surgical test by removing the clitoris altogether. His amputations were done with a pair of scissors, afterward plugging up the scar with lint. In a month the wound was healed and great numbers of patients were restored to health completely, "with all the vital powers greately strengthened." He reported many cures six and seven years after operation, and patients still free from spasms. For a time he had many followers, when fashion again changed the habitat of the disease, this time to its former exalted location in the interior of the calvarium. Since then, besides the *cures celebré* following removal of actual tumors, etc., from the brain, Dr. J. Wm. White, in the *Annals of Surgery*, in the two articles entitled "The Supposed Curative Effect of Operation *per se*." reports "extraordinary results from operations which proved to have no justification in a discoverable pathologic condition." He records ninety cases, in which trephining was performed, no lesion found, nothing in particular done, and yet marked relief and complete cure followed.

Drs. Agnew and White record the case of a man "greatly epileptic" who years before received a blow on the head. Trephining was done and nothing abnormal was found. Eighteen months after operation he was still without convulsions.

1. See De la danse de Saint Guy du XIV au XVII Siecle, by E. S. Albans, Paris, 1872; also the author's article, Mimetic Diseases, Jour. of Zoopholy.

J. H. Hamilton reports the case of a man aged 18 who had had fits from childhood, one or two daily. The right common carotid was tied, which diminished the fits in force and frequency. He had no fits after the second operation, which consisted of ligature of left carotid. This article also records instances in which permanent recovery followed tracheotomy, incision of the scalp, and amputation following dislocation of a bone of the great toe. Cures have also followed lithotomy, nerve section, nerve and muscle stretching and removal of cicatrices.

Dr. S. E. McKenly, in the *American Medical Gazette,* has reported the case of a boy aged 16 who, after having been an epileptic for years, fell through a bridge and had one testicle crushed. It was removed, and at the last report, six years after operation, there had been no fits.

William H. Carr reported the case of a man aged 24 who had had fits for seven years, averaging three weekly. The operation of tracheotomy was performed for another disease and he had no fits afterward.

In ten cases of castration for epilepsy all were helped and four reported cured two years after the operation. In twenty-four cases of removal of the superior cervical ganglion of the sympathetic nerve six patients had remained well at the end of two years, ten were improved and five remained in the original condition, two died soon after the operation. Twelve cases of epilepsy are reported as cured by such operation as stretching of the sciatic nerve, cauterization of the larynx, circumcision, application of setons to the back of the neck, tenotomy of external recti, burning of scalp, etc.

All of these recoveries seem capable of the explanation given in the beginning of this paper and constitute it would seem a claim for a more frequent surgery, but a surgery in which epileptologist should cooperate with the surgeon.

PSYCHASTHENIA: ITS SEMEIOLOGY AND NOSOLOGIC STATUS AMONG MENTAL DISORDERS.*

J. W. COURTNEY, M.D.
BOSTON.

The attempt to obtain recognition for anything approaching a clinical innovation in the realm of nervous or mental diseases is an herculean task. Among the rank and file of the profession such a movement naturally meets with the stolid indifference which is the lot of practically all phases of mental science; while among alienists and neurologists it encounters a curiously combative attitude, which is strikingly exemplified in the struggle experienced by psychasthenia in gaining recognition as a nosologic entity.

There is, however, a growing desire, born of necessity, on the part of neurologists, to limit the semeiologic scope of the old term neurasthenia. It is admittedly too vague, too clumsy—a mere diagnostic peg on which to hang symptomatic chains composed of heterogenous links—and yet substitute terms, *psychoneurosis,* for example, are equally unhappy, because of their absurd overcomprehensiveness and fatal lack of nosologic focus.

It would seem from the foregoing as if any term which has caused to crystallize solidly around it interrelated morbid psychic phenomena of presumably identical origin were worthy of general acceptance and a sheltering niche in nosology.

THE PHENOMENA OF PSYCHASTHENIA.

In approaching a case of psychasthenia, the first thing that impresses the clinician is that he is dealing with an idea of peculiar character. It is neither volitional nor practical; it does not represent an intellectual advancement; it is not concrete and does not lead to useful and satisfying achievement; lastly, it can not be submerged to the level of the subconscious like an ordinary idea. On the contrary, it is vague, abstract, insistent, monotonous; it is an incubus, an obsession, which fastens on the mind of its victim and goads it to that particular type of frenzy—characterized by the impulses, mental manias, *folies du doute,* tics, agitations, phobias, deliria of contact, anxiety and bizarre feelings of strangeness and depersonalization—which we are about to study.

In attempting to ferret out the obsession or obsessions that are at play in the particular case, the examiner meets with difficulties which are peculiar to this disorder. These difficulties are twofold; they arise in part from the unwillingness of the patient to admit that he harbors ideas recognized by him as wholly absurd and out of harmony with the normal working of his mind, and in part from his inability—either real or imaginary—to express himself intelligibly, consecutively and completely.

In spite of these drawbacks, it will be found that obsessions are of five general classes: obsessions of sacrilege, of crime, of disease, of shame of self and of shame of the body.

OBSESSIONS OF SACRILEGE.

The obsessions of sacrilege merit particular attention, for they are of a character so monstrous, so unthinkable to the healthy mind, so diabolically whimsical, that even the trained psychologist stands aghast at the avowal of such weird vagaries of human thought. The central, torturing ideas in this form of obsession are that the most sacred imaginable objects may be or really are, by desire or act of the patient, brought into juxtaposition with the most loathsome; that the Deity is reviled and Satan exalted. It is noteworthy that these obsessions rarely exist *ab origine,* but mark a rather advanced stage in the evolution of the case.

OBSESSIONS OF CRIME.

Obsessions of crime, in feebly-developed cases, may be of a purely speculative or philosophic order, the patient limiting himself to abstract considerations on the nature of good and evil, crime, evil-doing, punishment, law and so forth. Such speculations are harmless enough when indulged in by the normal person and utilized in the government of his own conduct. In the psychasthenic they are troublesome, because he endeavors, as a result of them, to govern the conduct of his entourage. In the majority of cases the obsession is not so innocuous, since it exists in the form of impulses to commit criminal acts. The impulses to rape, to murder, to commit suicide, to inflict self-mutilation (particularly of the genital organs), to perform unnatural sexual acts, to lie, steal, rove, to eat and drink inordinately, to do the opposite of everything dictated by a sense of duty, are among the commonest.

The impulse is never to accomplish these crimes in a commonplace way. In each case the act must have its peculiar stage-setting, conceived with a wealth of detail that is often astonishing.

* This article was prepared for the Section on Nervous and Mental Diseases of the American Medical Association, but not read. It is here abbreviated, but the complete article appears in the author's reprints.

A curious by-product of the criminal obsession is the feeling of remorse which often overtakes the patient. This remorse may follow in the wake of a specific criminal impulse, or it may bear on nearly every act in the patient's life. More curious still, it may originate in the idea of a crime toward which the patient has had no impulse whatsoever. Certain patients can not hear of or read about a crime without immediately accusing themselves of having committed it and experiencing all the tortures of remorse.

OBSESSIONS OF DISEASE.

Concerning the third order of obsessions, that of disease, it is curious to note that, while patients are absorbed in their sacrilegious and criminal preoccupations, they give but little thought to matters concerning their health or their lives. When, however, for any reason these preoccupations become temporarily less absorbing; in other words, when a patient gets a chance to think about his health, this becomes the object of the most extravagant ideas. At such times the thought of illness in all its forms, and even of death, absorbs all others.

One patient is much preoccupied about his heart; he counts its beats for hours together and is completely upset when he imagines that the beating is irregular. With heart disease as a starting point he sees the oncoming of cerebral hemorrhage with all its accompaniments. Another patient can not see a hearse, or go by an undertaking establishment, without thinking of his own death and funeral. Still another patient is troubled about the condition of his genital organs; and so on through the whole category of diseases.

OBSESSIONS OF SHAME OF SELF.

The victim of the obsession of shame of self constantly entertains the idea that what he does, what he is and what belongs to him is bad. Many of these ideas have a strong religious coloring, the patient being dissatisfied with the manner in which he performs certain religious duties. The general tendency in all patients afflicted with this obsession is toward self-deprecation, and their dissatisfaction may bear on all forms of intellectual activity. The most distressing to the patient of all these ideas is, perhaps, that of becoming insane, and this idea gives rise to many of the mental manias which we will later discuss, such as the mania of interrogation, precision, etc.

OBSESSIONS OF SHAME OF THE BODY.

The obsession of the shame of self has often only a purely physical bearing. In its most complete form, the shame is of the body as a whole; in other and less comprehensive cases it relates to certain parts and certain functions of the body only. Among the most curious of these obsessions is that of becoming fat, and the expedients adopted by patients to avoid this terrifying condition often threaten life itself. Other obsessions are those of awkwardness in the carriage of the body, or in the position of the limbs, of shame of the face, of the breasts, of the pubic hair, of blushing (erythrophobia), of the handwriting (causing writer's cramp),

From the division of the obsessions into five different groups, it must not be supposed that their origin differs with the group, or that they are lacking in bonds of union. On the contrary, the various groups are indissolubly linked, one with another. The obsession of sacrilege is merely an exaggeration of that of crime, while that of shame of self and of the body connotes one or both of these; and the obsession of disease is nearly always traceable to that of shame of the body.

RELATION OF THE OBSESSIONS.

A striking characteristic of all obsessions is that they have no bearing on objects in the outside world, but always on the acts of the patient himself. He is continually occupied with the thought of these acts, and his obsessions grow and flourish merely through the association of ideas. External objects have only a symbolic value in the growth of an obsession; they merely start the train of thought, the association of ideas that is the obsession.

Another peculiarity of the obsessions is that patients suffering from them are always impelled to do the very opposite of what they desire most to do at the moment. Furthermore, the conception underlying the impulse is so extreme, loathsome and foreign to the will of the patient that he recoils from it in horror. The content of the obsession, while retaining certain characteristics common to all cases, varies strikingly with the age, sex and civil state of the patient.

COMPULSORY IDEATION.

In spite of the markedly impulsive character of the psychasthenic's ideation, it is important to note, in the overwhelming majority of cases, the lack of all tendency to resultant action. This failure to act, in other words, to put into execution the content of his impulse, is one of the psychasthenic's most striking characteristics, and one which marks his attitude throughout the entire course of the disease. Even in the action of his mind he does not go so far as to believe in his obsessions, at least not altogether. On the contrary, he discusses and criticises them and even pronounces them absurd, but he can not voluntarily rid himself of them.

COMPULSORY ACTIVITY.

From this compulsory or obsessive ideation it is but a step, and a natural one, to some form of compulsory activity; hence it is not surprising, in the clinical study of the psychasthenic, to find that such activity constitutes an important element in his sufferings, or, since like begets like, that it possesses attributes identical in all respects with those of the ideas to which it owes its origin; in a word, that it is excessive and serves no useful purpose. This compulsory activity is commonly manifest in the realms of thought, motion and emotion.

Compulsory activity of the first variety (thought) may be spoken of, in clinical terms, as mental manias, the word mania being used in the popular sense. These manias are of two orders, the systematized and the diffuse. In the first order come: 1. The mania of oscillation, in which the mind can not reach a settled conviction or come to a definite decision, but continues to oscillate between two propositions. 2. The mania of interrogation, in which the questions bear on the subject's looks, feelings, memory, etc. 3. The manias of hesitation and deliberation. In these the doubts of the patient bear on his acts and prevent all practical execution of such acts. 4. The manias of omens, or questioning fortune. In these the patient seeks, although in vain, the determinant of his actions in semimystic outside phenomena, and trusts nothing to his will.

These four species of mania are closely interrelated. In all the subject is unable to decide between yes and no, to settle the question of "to be or not to be."

EXTREMISTS.

After the mind of the subject has oscillated hopelessly for a certain time between two given propositions, the pendulum is apt to swing beyond one or the other, and we are then confronted with the so-called manias of "going to the extreme." These comprise:

1. Manias of precision, in which a given instruction to the patient must contain an endless list of detail.

2. The mania of verification, in which the patient is constantly occupied in endeavoring to reassure himself that everything about his person is in order.

3. The mania of orderliness, in which the patient must arrange his house or his wardrobe in just such a way, and can not bear the slightest possible derangement of this order.

4. The mania of symmetry. Patients with this mania in arranging objects always have to put half to the right and half to the left of a central point. If they step with the right foot on a stone which is slightly elevated, they must immediately place the other foot on a similarly projecting stone. If the right hand touches anything cold, like marble, the left must do the same.

5. The mania of contrast and contradiction. Patients with this mania are forced either to think or say exactly the opposite of what they intend.

6. The mania of cleanliness. This form is often found in connection with mysophobia, but it is also observed in connection with the feeling of desire to do things with absolute precision.

7. Micromania. Certain patients attach much more importance to what is little than to what is big. Little noises annoy them, while big ones do not; little spots of grease, "little microbes," bits of matches, cigar ends, crumbs, etc., harass their souls.

8. The arithmetical mania. This is a sort of mania of hyperprecision. Patients with this mania have a predilection for anything that may be expressed in figures. With them a number fixes an idea or serves as the starting point of a whole train of ideas.

9. The mania of symbole. This is betrayed in the highly symbolic language patients affect in describing their feelings.

10. The mania of research and the mania of the past and the future. These forms compel the patient to go over every circumstance connected with an action and seek out every minute detail leading up to it. In addition to this, he must determine every possible future bearing of an act. In certain cases this mania of the future consists simply in trying to figure out what is going to happen in the course of a given space of time.

11. The mania of explanation. This goes beyond the question of the past and the future, and the patient may set himself the task of explaining to himself all the problems of science and philosophy.

12. The mania of precaution. This results from the need felt by the subject of accomplishing a number of minor acts in order to render easier a major act or to hinder an act which he dreads.

13. The mania of repetition or of going back. This mania is one of the most important; the subject is never satisfied with his action and is compelled to keep repeating it. This may apply to the performance of certain bodily functions, such as urination, and may cause the patient to return to the closet an astonishing number of times to make sure that he has got out the last drop from his bladder. The mania of going back comes from a disinclination to change; the same idea must be taken up in the same place at the same hour.

14. The manias of processes and of perfection. Certain patients do not limit themselves to the simple repetition of acts, but have a mania for inventing processes for perfecting them. The patient who returns fifty times to the closet to assure himself that he has completely evacuated his bladder often employs bizarre methods for arriving at perfection in the act.

15. The manias of the extreme and of the infinite. In this form all mental operations are carried to the most extreme limit attainable. This tendency is observed in the sacrileges, impulses, shame, remorse, etc., which the patients conjure up in their imaginations.

MANIAS OF REPARATION AND COMPROMISES.

Still unsatisfied by the outcome of the preceding attempts to attain perfection in idea or act, the patient invents a further series of exercises, intended by him to make up for the faults of the old system. This new system is made up of manias of reparation and compromises. Under these we have:

1. The mania of compensation. In this the patient seeks to correct one act by another. If, for instance, he has the obsession of shame of the body and is fearful of becoming fat, he may eat one kind of food to please the physician, but he must immediately take another which is in harmony with his notion of avoiding corpulence.

2. The mania of expiation. This is induced by the feeling that a certain act is shameful and must be compensated for by one that is disagreeable or painful. It represents a sort of self-inflicted penance, and is observed particularly among patients who have the obsession of the shame of self or of the body.

3. The mania of vows. This consists in the making of vows to expiate any future sin (eic) of omission or commission of which the patient may adjudge himself guilty.

4. The mania of conjuration. This is observed in cases where patients not only are not satisfied with their acts, but are tempted to do such as are really reprehensible. The patient endeavors to get rid of his evil impulse by substituting what he considers a good one, and the peculiar gestures made by him while he is pronouncing, so to speak, the "arrhe Satane" may be the first indication of the existence not only of the mania, but of the disease which gives rise to it.

SIMILARITY OF MANIAS.

If we study closely the foregoing manias we must be impressed by the strong traits of similarity which characterize them all. In last analysis they are the product of forced mental unrest, of the activity of the mind consciously working under dynamic conditions which are inadequate to enable it to cope with the concrete, the actual and the practical, but which compel it to flounder about pitiably in the realm of the abstract, the illusive and the imaginary. From the fact that in some patients a particular mania appears to dominate the clinical picture certain observers have been misguided enough to exalt this phenomenon to the dignity of a clinical entity; hence the literature teems with descriptions of these pseudo-entities, to the everlasting detriment of clinical preciseness in dealing with morbid mental phenomena. It is against this tendency that this paper is particularly aimed, and it is my contention that a more careful study of all the facts surrounding these clinical pseudo-entities will show in every case that they owe their origin to that basal morbid condition called psychasthenia.

The apparently isolated existence of any given mania

is merely episodic, the result of a given combination of circumstances. Close investigation will always reveal the fact that a person who appears to run to a single form has, in reality, been previously possessed of a dozen or more other forms. This fact is indirectly proved in certain cases where a whole series of manias are linked together by association of ideas. These cases represent that interesting condition known as mental rumination (*Ideen Flucht*).

ENFORCED REVERY.

There is still another condition of enforced mental activity, which is observed in psychasthenics, often at the outset of the disorder and before the more systematized obsessions, manias, etc., become manifest. This is the condition of enforced revery. In this the patients find themselves constantly occupied to the exclusion of all voluntary legitimate and useful mental operations with thoughts which they clearly recognize as foreign to them but which enter their minds and, so to speak, pullulate therein with incredible rapidity. These thoughts are not essentially pathologic in character; they are reflections, recollections of the past, imaginations concerning the future, meditations, discussions, etc., characterized by their irresistibility and their power to cripple useful thought and action.

A comparison of these enforced reveries with the mental rumination and the manias previously described shows that they all result from a mental activity which is beyond the patient's will to control. They embrace, furthermore, the major part of the intellectual operations—associations of ideas, memory, imagination, judgment, reasoning—in a word, every sort of operation which has to do with mental images and abstract ideas. There is, unfortunately, nothing about them which leads to real and concrete accomplishment, and it is this characteristic which gives them their special cachet and justifies the designation of compulsory mental activity. This same characteristic stands forth very prominently, as we shall presently see, in the same sort of activity originating in the realm of motion and emotion.

COMPULSORY MOTOR ACTIVITIES.

With regard to the compulsory motor activities, it may be said that, like the enforced mental varieties just considered, they are neither in harmony with external circumstances nor with the desire of the patient. They are, however, neither unconscious nor entirely involuntary. The patient is aware, at least in part, that they are performed and that they are performed because he wills it, but he feels compelled to have this useless and absurd volition.

These enforced activities may be of two orders—the systematic and the diffuse; when systematic they constitute the tics; when diffuse, the crises of agitation.

The tic presents certain characteristics, the most striking of which is that it resembles that systematic ensemble of movements called act. Its second characteristic is that it is a sterile and inopportune act. Lastly, it is an act accompanied by phenomena of consciousness, volition and thought. To resume these characteristics, a tic is a complex of systematized movements, an act reproduced regularly and frequently, but always in a useless, inopportune and incomplete manner, because of the fact that the will feels itself forced into its accomplishment.

In the first group of these phenomena come the so-called tics of attaining perfection, comprising:

1. The immobilities associated with the mania of oscillation. These are attitudes assumed by patients to justify their inactivity in the eyes of spectators; one holds a book in the hand, another remains standing with the foot poised in the air as if in the act of advancing. A large number of tics are attached to the manias of precision and verification. Among these are (a) the constant shaking of the head to get the hat properly in place, and (b) the repeated looking in the glass and the feeling of certain parts of the body or of the clothing to make sure that everything is in place and in proper condition. One patient keeps feeling of her limbs, body and chest to reassure herself that she is not getting fat; another shakes her head to be sure that her earrings are all right, and so forth and so on. Gradually the primary idea which caused the tic disappears and the movement is executed rapidly in an incomplete and incessant manner. Analogous tics result from the other manias of perfection above cited.

2. Tics of defense. These are composed of movements made by patients to compensate for some disagreeable thing, or to defend themselves from some harmful influence. Tics of this sort are very numerous and varied, each tic corresponding to the mental mania which gives rise to it. In general, it may be said, however, that the mental mania is apt to be least developed where the tic is most complete, but as analogous tendencies give rise to the one or the other of these two phenomena, it is only right to group the tics after the fashion of the mental manias.

CRISES OF AGITATION.

Next in order come the diffuse motor agitations—the crises of agitation—which are analogous to the diffuse mental activities already described. The most curious of these is:

1. *The Crisis of Effort.* In this the patient, dissatisfied with himself and desiring to do better, concludes that he must do as normal individuals do under the same circumstances, that is, make efforts; but, unfortunately for him, these efforts are soon transformed into a mania. One patient makes sufficient effort to raise a heavy burden before opening a door or saying his prayers, and goes through contortions for hours. Another goes through the most frightful contortions several times a day. These are voluntary or semi-voluntary and are indulged in whenever the subject feels or imagines that some action of hers is bad, that a thought is shameful, or that she is going to have one of her obsessing mental images.

2. *The Crises of Walking and Talking.* Certain patients who are troubled by an act or an idea experience a more or less irresistible impulse to walk, and their trouble ceases only when they have traversed a long distance. After the walking crisis has passed the patient returns calmly home; there is no coming to with surprise, and the memory of what has taken place is practically complete. On the same basis arises the crises of talking. The patient under mental stress experiences an overmastering impulse to talk, to tell all his woes to the first comer. The crisis may last for hours and disappear only when the patient has covered innumerable sheets of paper with the account of his feelings.

3. *The Crises of Excitation.* In this final class the motor agitation may be more diffuse, more incoordinate. The patient, after some impotent effort of the will, or in consequence of some slight emotion, suddenly arises, ceases his work, interrupts some mental mania or interrogatory rumination, and gives himself up to a disordered agitation. This agitation soon changes from

the mental to the motor variety. The patient may, to all appearances, be maniacal—breaking and upsetting objects in his path—and dangerous to approach. In reality he breaks nothing of any value and hurts nobody.

In concluding this section I desire to call attention again to the thread of connection running through all the symptoms described. The motor agitations, like the mental, are divided into two orders—the systematized and the diffuse—and may practically replace the mental in many cases. In the emotional sphere the manifestations of enforced activity preserve the same dual order observed in the intellectual and motor spheres; hence we have to deal with systematized emotional agitations or phobias and diffuse emotional agitation or states of anxiety (*les angoisses*).

In a preliminary group come the "algias" or painful states of certain parts and certain organs of the body, observed in many cases. These algias are not ordinary pains, the result of local or organic mischief. On the contrary, they are either not traceable to any palpable disturbance in the parts complained of or they are out of all proportion to the morbid condition which is supposed to give rise to them. In certain cases they are practically constant, and if the alleged painful part is touched lightly, or even approached, the patient cringes, roars with pain, changes color and experiences violent perturbations of his circulation and respiration. In other cases the algias begin at the moment an organ starts to discharge its natural functions. These latter constitute the phobias of functions and will be considered by themselves.

Among the common algias are those of the head, genital organs, the bladder and ureter and anus, although no region of the body is exempt, even to the tip of a finger.

THE PHOBIAS.

Under the phobias of the bodily functions come:

1. *The Phobias of the Movements of the Limbs.* In these the limb or limbs in question may be intact in every way, there being neither paralysis nor contracture, but the patient has a horror of moving the limb or limbs on account of the anguish which movement evokes. These phobias of movement comprise certain cases of writer's cramp; also basophobia (fear of walking), akathisia (fear of sitting down), the fear of eating, the fear of swallowing, the fear accompanying digestion (both stomachal and intestinal), the fear of phonation (usually resulting from a supposed disease in the larynx), the fear of smelling, the fear of hearing and the fear of looking (including photophobia).

All these algias and these phobias of functions present common characteristics; they develop in connection with the sensation determined by the excitation of a part of the body—the skin, muscles, pharynx, ear, eyes, etc. It must not be supposed, however, that the regions in question are hyperesthetic and that a local disease causes these painful sensations. On the contrary, careful examination always shows that the parts in question are sound and that sensations arising therefrom are in nowise disturbed. There is no true anesthesia or hyperesthesia.

2. *The Phobias of Objects* (*délire du contact*). In this phobia the perception of a certain object by any of the senses produces a painful emotion; hence the patient develops a fear of the object which occasions his trouble. The objects occasioning this phobia are very varied; one patient fears the sight of a dog, another can not bear to look at the stars, a third has a mortal terror of knives or other sharp or pointed instruments. The *délire du contact* furnishes many interesting examples: One patient who dreads to make errors in spelling, fears to touch anything to do with writing; another can not touch anything about her apartments, because she fears it is fouled by the urine of rats; a third goes about with the nasal orifices plugged for fear that particles of the Sacred Host may enter her body when she is not in a state of grace; a fourth is continually washing the hands on account of a fear of contamination by dirt (mysophobia), and so on through a long list.

3. *The Phobias of Places* (*agoraphobia*). This form of pathologic fear overtakes the patient when he finds himself in an open space of considerable size. He experiences a sense of complete helplessness associated with intense mental and physical suffering. The converse of this agoraphobia is claustrophobia, or fear of enclosed places. Here the patient's presence in a theater, a church, a railway car or a carriage suffices to excite the fear with all its train of associated morbid phenomena. Another curious fear is that of blushing. This is in reality a topophobia, since the patient associates the original attack of blushing with a certain situation and seeks to avoid such a situation ever after. This phobia, which is pitiably silly in essence, may have grave consequences, for it may compel the patient to shun society, and even his professional duties, and seek solitude and isolation, thereby wrecking his entire career. The term "erythrophobia" has been applied by Pitres and Régis to this form. The situation which originally gives rise to it is usually one in which the patient is expected to acquit himself of some social duty, to do something in a more or less public manner; hence the erythrophobia is naturally associated with the phobia of being before one's fellows, of being in public and of having to do something in public. Such phobias may well be termed social phobias. In a final consideration of this group it may be said that all these phobias, whether they come back to the agoraphobic, the claustrophobic or the social type, appear to have one point in common; they do not, like the preceding group, hinge on an object which awakens the idea of an act, they are determined by the perception of the situation and by the feelings to which that perception gives birth.

4. *The Phobias of Ideas.* Phobias of this order often develop without having a point of departure in a localized sensation, the perception of an object, or even the perception of a situation; they simply develop in the wake of an idea, which presents itself in abstract fashion in the mind of the patient. Nearly all obsessing ideas are accompanied by phobias. With the obsessions of sacrilege come the phobias of the devil, of hell and of blasphemy. Analogous phobias are associated with the obsessions of crime and of shame. Hypochondriacal ideas also are a fertile source of phobias, notable among which are those associated with the idea of death and of being buried alive. Finally, the phobias of ideas are often intimately linked with the phobias of objects and of situations.

THE ANXIOUS STATES.

Next in order are the diffuse emotional agitations—the anxious states (*les angoisses*). These states are the result of a perturbation of the individual, both mentally and physically, and are brought about by the phobias, just as rumination is brought about by the mental manias and the diffuse agitations by the tics. In certain cases they represent a sort of pantophobia with episodic crises occasioned by the happenings of the moment. A patient

with this pantophobic tendency can not make her way over a street crossing without being thrown into a crisis of anxiety by the fear that a wheel may become detached from a passing vehicle and run over her. She can not walk along the sidewalk without being thrown into the same state by fear that a tile may become detached from a roof and hit her on the head. She can not sit at the table without the anxiety attendant on a fear of choking. She can not leave the house without being overwhelmed by the fear that one of her family may have died suddenly, and so rushes back to reassure herself. Every act, every event, every incident in her life becomes the signal for the starting of an anxious state, whose special form is determined by the chance occasioning factor.

In other cases—the purest type—the intellectual element (occasioning factor) is entirely absent. The patient has a crisis of anxiety, in which she throws her arms and legs about, moves about the room, strikes the furniture, pants, has a rapid heart action, cries, despairs, complains of feeling badly, of being unhappy, and declares that something untoward, she can not tell what, is going to happen. For this crisis she can assign no intellectual cause whatsoever, a fact which demonstrates that the anxious state does not always take the systematic form of the phobias, but may be vague, diffuse and lacking entirely in connections with a given intellectual phenomenon.

The anxious states are often accompanied by physiologic perturbations of great clinical interest. These perturbations are difficult to observe with minuteness and accuracy, since the crises do not recur at regular hours, or even at times always favorable to observation. On the contrary, the patient is apt to arrest his crisis altogether before spectators, or the crisis is apt to melt away before attempts at analysis. On examining patients who complain of great weakness, or even paralysis of the limbs during a crisis, one finds only slight degrees of muscular weakness, which may be made to disappear by persuasion. One does, however, find ataxia and incoordination sufficient in extent to interfere with the finer associated movements. The speech also is often affected, becoming staccato, hesitating and confusing.

One must not conclude from what has been said concerning these physiologic disturbances occurring in the anxious states that these phenomena constitute the whole clinical picture; on the contrary, these states are equally cerebral and intellectual and are very striking in character. During the crisis the patient experiences all kinds of queer sensations in the head and feels as if he were going insane. In addition to this terrifying feeling that his reason is departing, he often has also the equally comforting conviction that he is going to die, that he can no longer perceive the outside world, that he does not know where he is or who he is, or that he has lost his liberty and become a mere automaton without control over his acts.

PATHOLOGIC IDENTITY.

To any one who has had the patience to follow the preceding minutely detailed exposition of the semieologic manifestations of the morbid conditions under consideration it must be obvious that their pathology is identical. The fact that they are not always all present in the same case, that the existence of certain groups of them in certain cases may produce a clinical picture apparently widely at variance with that produced by a different grouping in other cases in nowise militates against this notion of the identity of the pathologic condition underlying them. The starting point in all is a morbid ideation; not, however, an indifferent and vague morbid ideation, but a particular form which the subject himself recognizes as morbid and against which he, for a time at least, struggles. As a natural consequence of this morbid ideation we should expect morbid action, and this has been thoroughly exemplified in its various forms —intellectual, emotional and motor; finally, it should excite no surprise that these morbid activities show wide variations, since but few organisms react in identical fashion to a given stimulus.

From all that precedes it is, therefore, logical to contend that all the symptoms described, whether in a given case they appear singly or in groups, should have one and only one clinical designation; and that all terms, such as disease of obsession, *folie du doute*, manias (of all kinds), phobias, tics, etc., when used to imply that the symptom or group of symptoms they cover, are real clinical entities, are erroneously used, to the detriment of clinical precision. Whether or not the term psychasthenia is the proper substitute for all these various misnomers remains to be demonstrated.

Before leaving this portion of the paper I wish to make clear the fact that the conditions of enforced activity above described, whether intellectual, emotional or motor, are not continuously in play in a given case; neither are they wholly irresistible. They represent crises which may be followed by periods of comparative calm, that is to say, periods during which only the most attenuated forms of rumination and the anxious states appear to occupy the patient's mind. The systematized forced activities, such as the tics and the phobias, are really brought out only by distinct occasioning factors, such as: 1, Attempts to execute something willed, a voluntary action, which may be purely bodily (the movement of a limb), or more complicated, such as the performance of some professional or social duty; 2, negative action, or the attempted restraint of an action which is distasteful, or may have untoward results; 3, attention; 4, emotion.

In the intervals between the crises the patients present certain characteristics, or stigmata, which are noteworthy, but before proceeding to a consideration of these I propose to take up certain important preliminary matters pertaining to the psychasthenic, namely, his heredity, the synthetic operations which constitute the upbuilding of his personality, and the age at which the partial disaggregation of this personality, which we term psychasthenia, first becomes manifest.

HEREDITY IN PSYCHASTHENIA.

In studying the ancestry, both immediate and remote, of the psychasthenic one finds abundant evidence of its importance as a predisposing influence. At least 75 per cent. of the cases of psychasthenia come from families in which mental alienation in some form or other has appeared in more than one generation. It is found, moreover, that alcoholism, tuberculosis, syphilis and arthritism in the ancestry also occupy a prominent pathogenetic rank. Still more interesting and convincing is the finding that either the father or mother of the psychasthenic may be afflicted with the same trouble, and that the patient bears a strong physical resemblance to the afflicted parent. In still another group of cases, where the immediate forebears are not actually psychasthenic, they nevertheless present many stigmata of mental and physical insufficiency, such as timidity, lack of balance and sound judgment, indecision, morbid emo-

tionalism, etc., which make but a sorry heritage for their offspring.

THE GROWTH OF PERSONALITY.

In the upbuilding of the future psychasthenic's personality we find certain factors at work, which seem to me to have a most important bearing on the coloring of his obsessions. This upbuilding of the personality is naturally too complex a synthetic process (since it includes the education of the individual in the broadest sense) to be considered in detail in a paper of this sort. Hence only certain of these synthetic elements, namely, the religious training, the notions acquired of the body and its functions and of the laws which control the acts of the individual toward his fellows, will be touched on and their potential pathogenetic influence indicated.

If the average child, even though he be destined to become a normal man, is, as Lombroso[3] has said, possessed of a transitory criminality; if he is a liar, a thief, without affection, unmoral, if he does not recognize any law of possession, except for himself, is cruel even to ferocity toward animals and the feeble, then surely the child who is destined to become psychasthenic has a fearful uphill task before him, even under the best of circumstances, to attain anything like a stable character for any length of time during his maturity.

Unfortunately for those candidates for psychasthenia, surrounding circumstances are not by any means of the best. In their home life they lack the example of parents of strong character, keen to appreciate and quick to avert many of the dangers to which a child embarking on life is exposed. At a period when they should be leading the freest possible existence of healthy animalism in the open, their minds are directed toward religious problems depressing, not to say terrifying, enough to disturb the balance of the sanest adult.

No less important in an analogous direction are the ideas acquired in regard to the body and its functions. Concerning the genital sphere alone these ideas are grotesque beyond expression, but are too well known to every physician to require even mention. In the matter of physiology as applied to other parts of the body, lay ignorance is equally colossal, and the same characterization applies to the average understanding of insanity and its causes.

The ideas acquired in childhood with regard to the law and its enforcement are similarly bizarre, and many a person reaches young adult life with an unreasoning terror of policemen and other myrmidons of the law ineradicably stamped on his mind.

These three faulty aspects of early training certainly tend to explain, in part at least, the content of certain obsessions and phobias, for it is a common observation that in psychasthenia the mental activities show a reversal to the childish state and concern themselves more with acquired memories than with the actualities of the moment.

With regard to the distribution of the disease between the sexes, statistics show that it is three times as common among females as among males. This may be attributed to the fact that the female, generally speaking, stands intellectually below the male and is much more inclined to such inferior mental operations as reverie and emotion.

It may also be said that no age is exempt from psychasthenia, although from statistics it appears to be most commonly an affliction of early adult life. Statistics on this point are, however, particularly liable to err, since the age at which the trouble apparently begins, i. e., the age at which the patient seeks or is forced to undergo medical treatment, rarely, if ever, coincides with the first manifestation of the disorder.

As stated before, psychasthenia is not a morbid condition marked by an uninterrupted succession of crises, such as have been so fully described. On the contrary, there are intervals of comparative freedom from these occurrences during which the patient exhibits certain stigmata or characteristics (in part the product of his toneless physical and mental organization and in part the result of faulty education) that are of great value in showing the feebly synthetized nature of his personality.

Psychasthenics are rarely ever satisfied with what they do; they feel that their acts are not completely carried out, that there is something wanting about them to make them complete and successful. They grow to have a horror of all voluntary action on account of the exaggerated difficulty they attach to it, and even the bare thought of making an effort becomes painful to them. Feelings of incapacity possess them, and if they can overcome their natural indecision for long enough to attempt anything this attempt is associated with actual torment. Again, they put so little will power, so little of themselves, into an attempt to do anything that they feel like mere machines, mere automatons, acted on by some external force or agency.

This supposedly automatic character of attempted action leads to the further feeling on the part of the victims that they have lost their liberty, which feeling gives rise in turn to one of discontent, shame and humility. They are particularly timorous about attempting any act in public, a characteristic which leads to certain of the topophobias already described. Even the negative use of the will is accompanied by equal non-success, and patients have the same feeling of actual suffering, difficulty and automatism when it comes to accepting the inevitable. These various feelings with regard to actions are closely interrelated and in reality all spring from the fundamental feeling of incompletion.

THE PSYCHASTHENIC'S INTELLECT AND EMOTION.

In the intellectual sphere the same observations hold true. Patients have the same difficulties about attempting operations of the mind. Their perceptive feelings seem to them incomplete and they complain that the outside world appears to them as if seen through a veil or a thick mist; solid objects lose their form and seem flat or otherwise queer; familiar places and familiar objects look unnatural, leading to a sense of disorientation on the part of the patient; and reality becomes a sort of dream.

Similar curious feelings are experienced with regard to the passage of time. Certain patients complain that the moment of the onset of their trouble seems to them to be separated from that in which they felt like themselves by centuries of time, whereas the lightning-like passage of time during their ill periods evokes grievous lamentations.

In view of what has been said with regard to the perception of outside objects, it is not strange that patients should have similar feelings with regard to all operations of the mind, all conceptions and ideas. As a matter of fact, they can not bring mental operations to completeness; hence they are in a constant state of doubt, confusion and mystification.

In the emotional sphere identical feelings are encoun-

3. Sixth Internat. Cong. of Criminal Anthropology, Turin, 1906.

tered, especially noteworthy being the feeling of perpetual disquietude, which springs from the inability to achieve completeness in any sense.

Among all these feelings of incompletion none is so interesting or so important as that in regard to the personal perception. The psychasthenic's perception of self may be modified in one of three ways. In the first he experiences merely a sense of strangeness with regard to himself; he is aware that in his thoughts, feelings and reaction to his environment he is not entirely his old self. In the second he recognizes an actual splitting up of his personality into two distinct and separate units, one of which seems to stand apart, powerless to control the bizarre thoughts and acts of the other; while in the third there is complete annihilation of the original personality, with substitution of another which is in every sense inferior to the original.

ETIOLOGY.

Psychasthenia is of two orders, the hereditary and the acquired, and its onset may be either gradual or sudden. Among the alleged immediate exciting causes nearly every known form of disease to which the flesh is heir may be found. In the judgment of certain writers the causal relation of masturbation to the disorder is to be strongly emphasized, and without entering on a discussion of this subject, I wish to express myself as decidedly in accord with such a view.

In cases which are said to come on rapidly, after some emotional shock or some infection, one finds himself in the presence of the symptoms already described, in their complete form. These cases are, however, rare and a close analysis of the antecedents of many such will reveal the pre-existence of the symptoms indicating a more or less profound lowering of the nervous tone. In the more slowly developing cases feelings indicative of psychologic insufficiency are apt to have existed for years prior to the actual outbreak of the disease whose *début* is often marked by aprosexia, doubts and incapacity for all mental efforts.

The matter of treatment does not fall within the scope of this paper. As to the course of the disease, it may be said in a general way that it shows a certain tendency to chronicity; but such a prognosis does not by any means apply to all cases. The acquired form often disappears with the removal of the exciting causes, while the hereditary is marked, in many cases, by long remissions and by semi-spontaneous recovery after the patient has reached middle life. The complications of the disease will be spoken of later.

PATHOLOGY.

Turning now to a consideration of the pathology of psychasthenia, we are compelled, from our ignorance of the material morbid changes which underlie mental diseases in general, to discuss the question in psychologic terms only. From our knowledge of the clinical manifestations of the disease, we may say that the psychasthenic is a person who has suffered a partial disintegration of the personality, a change in the ego, which is distinct and peculiar. The subject is not in any true sense insane, yet he undergoes such a transformation in his manner of thinking, willing and doing that he can not keep pace with the movement of the everyday world about him. He finds that his transformed ego lives in the realms of the abstract, produces only unwelcome ideas which have no practical utility, bear no relation to the concrete, the actual and the real, and which lead to actions that are as incomplete as they are sterile in practical achievement. The feeling of unreality, both in its relation to the personality and to the outside world, is fundamental in psychasthenia and is of paramount importance in establishing the nosologic status of the disease which is, in reality, a *forme fruste* of intellectual *petit mal*, a sort of diluted *Dämmerzustand*.

This designation is, moreover, no mere figure of speech. If we compare the automatic acts of the victim of psychic epilepsy—running as they do through the whole gamut of executed ideation, from the mere removal of portions of the clothing to the commission of every conceivable form of crime—with the tics and criminal impulses of the psychasthenic, it must be obvious that the pathogenetic substratum is identical in kind and that the sole difference between the two cases lies in the fact that in the psychasthenic the reasoning and restraining ego is not completely submerged, while in the epileptic it is. There is still another bond of union between the two states, which is very striking. In the psychasthenic the psychologic tension is not always at the same dead level, as the symptoms prove. There are constant oscillations in this tension, which are not the result of the obsessions, but occur unexpectedly and bring about the feeling of unreality and depersonalization. In the epileptic, likewise, the lowering of the psychologic tension is not always sufficiently sharp and extensive to abolish consciousness completely, and the patient has the same feelings of strangeness and unreality, both in the perception of self and of the outside world, which are common to the psychasthenic. And in final support of my contention I would adduce the fact that a certain number of psychasthenics do ultimately develop the major form of epilepsy.

PSYCHASTHENIA DIFFERENTIATED.

From hysteria, psychasthenia is distinguished pathologically, as Janet[4] has pointed out, by the fact that the disturbance of consciousness which marks it is general. Throughout the psychasthenic's whole field of consciousness there is evidence of activity, however feeble and fruitless it may be, while in that of the hysteric all activity is carried on within a narrow corner. Hence the psychasthenic never exhibits a completeness in any of his pathologic phenomena. He has impulses, but doesn't carry them out; he has hallucinations, but they do not seem real to him and he is never deceived by them; he has obsessing ideas, but knows they are false and is the first to doubt them; he has periods of agitation and periods of immobility, but never gets as far as a real "attack" or a somnambulism. His crises are never followed by amnesia; he feels at times a doubling of his personality, but always knows the thoughts of the second ego. This characteristic incompleteness is also found in the normal phenomena which he retains. He does not perceive or remember well; his attention and execution are defective, but he is never completely anesthetic, amnesic or paralytic. He is, in a word, incomplete always and in all respects, but never gets farther than this state of general insufficiency. For him there is a veil over the higher psychologic phenomena, which removes them from him at all points without causing any definite and profound gap at any particular point.

The hysteric, on the other hand, exhibits important differences in every direction. In the first place the phenomena he retains are complete in every way and attain reality. He has no doubts concerning his person-

4. Les Obsessions et la Psychasténie, I, p. 734.

ality or the outside world; on the contrary, the phenomena preserved are often overdeveloped, and the subject executes completely his impulsive ideas, so completely and so easily, indeed, that a suggested idea immediately transforms itself into an act, a mental image into a complete hallucination, with belief in its reality. Again, the hysteric carries to an extreme the negative phenomena, and his mental operations betray a real gap; he has anesthesias, amnesias, paralyses and real subconscious operations. It is true that these gaps appear ordinarily only in the realm of personal consciousness, but the psychasthenic doesn't present even these.

The distinction between the condition we term neurasthenia and that under consideration in this article is not so striking. In the main it may be said that among psychasthenics the rachialgias, the chronic feeling of fatigue, the circulatory disturbances, the dyspepsias, the paresthesias, the insomnias, etc., are as common as among the neurasthenics, but the psychasthenic, is for the most part, too preoccupied with his obsessions, mental manias, tics, etc., to give heed to them. The nervous insufficiency in the two conditions is probably identical in kind, but in the psychasthenic the intellectual manifestations preponderate.

Many of the symptoms of psychasthenia are also met with in the early stages of several different forms of well-recognized psychoses, but in such cases it may be said with positiveness that the purely psychasthenic state does not persist for long as such, and that the psychosis, of which it is but the forerunner, soon makes itself manifest. This fact that the psychasthenic state is often the sole manifestation of the primary state of a number of psychoses which are characterized later by an evolution that distinguishes them clinically in a more or less clear-cut way is interesting as showing that the primary lowering of the psychologic tension is identical in all, and that the ultimate clinical variations are probably the result of special exogenous determinants.

This transitory existence of psychasthenia under the conditions above described is significant, but does not clearly establish its nosologic status. To do this the disease must be studied in that form in which it retains throughout its entire existence the characteristics of a stable entity. This is the point of view from which I have endeavored to study it in this paper, and from which also I have reached the conclusion already stated, that psychasthenia is a *forme fruste* of intellectual *petit mal.*

THE RELATIONS OF THE DIAPHRAGM AS REVEALED BY THE ROENTGEN RAY.

SIDNEY LANGE, A.B., M.D.
Radiographer to the Cincinnati Hospital.
CINCINNATI, OHIO.

The Roentgen ray has made, perhaps, no more important revelation to the medical eye than that of the upper contour of the diaphragm. The position and movements of the diaphragm have received but little consideration in our modern systems of physical diagnosis, yet it is frequently demonstrated that the recognition of many thoracic and abdominal diseases is dependent on accurate data concerning the phrenic contour and position. It has been aptly said that the diaphragm is the vital barometer of the chest. And we may add that it is an important indicator of intra-abdominal conditions as well. The Roentgen ray has made possible a broader knowledge of the physiology and pathology of this organ.

A skilled diagnostician may, in a favorable subject, determine by percussion the level of the phrenic circumference and may in the same way roughly estimate the extent of the excursions of the diaphragm in forced respiration. Litten's diaphragm phenomenon (when present), furthermore, gives an indication of the line of cleavage between the diaphragm and the chest wall at the beginning inspiration. But these methods are not only difficult or impossible to carry out in examining heavy individuals, but they also fail to furnish information of the utmost importance, namely, the level, contour and excursions of the phrenic *dome* as well as the phrenic circumference. For, percussing out the phrenic circumference gives us no clue as to whether the dome is well arched or flat.

The level of the diaphragm varies in different individuals, being dependent chiefly on the body height and the length of the chest. Guillemont and Vannier[1] state that the average position of the diaphragmatic curve on the right side is 16.5 cm. (6½ in.) below the suprasternal notch, while the left side is 2 cm. (5/6 in.) lower. But whatever may be the variability of the absolute level in different individuals, all observers are agreed that certain relations must be maintained between the right and left sides, and that variations (above certain limits) in these relations are pathologic. Francke[2]

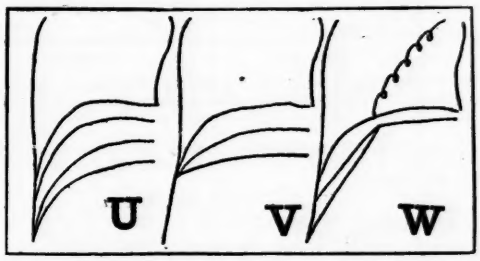


Fig. 1.—(After Holzknecht.) U. The normal (apparent) downward recession of the attachment of the diaphragm during inspiration. V. A fixation of phrenic attachment and a consequent flattening of the dome during inspiration. W. The mechanism of the kinking of the diaphragm due to a fibrous adhesion.

states that the right phrenic dome is normally about 2.5 cm. (1 in.) higher than the left. He found, however, by making a large series of orthodiagraphic measurements, that in a small percentage of individuals the two halves of the diaphragm may be on the same level, or the left may be even slightly higher (up to 1.7 cm.—2/3 in.) than the right. Such relations are to be looked on as exceptional, however. The various thoracic and abdominal conditions that would lead to changes in the phrenic level will at once suggest themselves.

The shape of the diaphragm should be well curved at all times. Contrary to what is ordinarily taught in most works on physiology, the diaphragm does not flatten appreciably during ordinary respiration. Flattening, except in the most forcible inspiration, must be regarded as pathologic. Holzknecht[3] showed as early in the history of the Roentgen ray as 1899 that in inspiration there is an apparent recession downward of the attachment of the diaphragm to the chest walls, with little flattening

1. Arch. of Roentgen Ray, November and December, 1905, January, 1906.
2. Die Orthodiagraphie.
3. Die Roentgen Diagnostik der Erkrankungen der Brusteingeweide.

(Fig. 1). Walsham and Orton,[4] in their recent book, have emphasized the same observation. The margin of the phrenic contour as seen against the clear lung area should be sharp and clean. Hazy, irregular and indistinct outlines may indicate fibroid changes in the pleura or lung bases.

The extent of the phrenic excursions, measured by the Roentgen ray, as established by different authorities, varies from 2 cm. (¾ in.) in quiet respiration to 6 or 8 cm. (2½ or 3 in.) in forced breathing. These figures represent an average taken from a large number of examinations, and variations from these figures may be encountered in examining any given individual. The maximum excursion in forced inspiration can often be brought out only after several trials and some practice on the part of the patient in abdominal breathing. But whatever may be the variation in the absolute extent of the phrenic excursion, any variation in the relative movements of the right and left halves of the diaphragm is, as Williams[5] has pointed out, very significant. The right and left domes should move equally and together.

Alteration of the well-arched character and mobility of the phrenic dome is a constant accompaniment of chronic pulmonary tuberculosis, especially after much fibrosis has occurred, and particularly as a sequel of basal consolidation and basal or diaphragmatic pleurisy. The commonest picture in the cases of unilateral tubercular involvement is a high, well arched dome on the affected side, which moves only slightly or not at all, and a low flattened dome on the unaffected side, the latter being due probably to compensatory emphysema of the healthy lung (Fig. 2).

Other cases of chronic phthisis, especially the extensive bilateral ones, may show a high position and diminished excursion of both sides. Still other cases of chronic pulmonary tuberculosis will show a flattening of both sides with partial immobility, either at a high or low level (Fig. 3).

The high position of the phrenic dome with limited excursions in chronic pulmonary tuberculosis has been variously ascribed to deficient lung expansion due to consolidation or fibrosis or to occlusion of one or more of the larger air passages. Other authorities have attributed it to adhesions with the pleura and the base of the lungs. Again, pressure on the phrenic nerve by inflammation and adhesions as it comes in relation with the lung apices has been advanced as a cause. That such a cause may possibly operate is shown and described in Figure 4.

PHRENIC FLATTENING.

The flattening of the phrenic contour with more or less fixation at a low level in the chest may be the result of compensatory expansion of the remaining healthy parts of the lungs. When this flattening occurs at a high level it may be the sequel of a chronic basal indurative process. That adhesions do form and alter the shape and restrict the movements of the diaphragm may be optically demonstrated. Figure 5 shows a skiagram of the chest of a young adult who has made a good recovery from a right-sided pleurisy, with effusion, of tubercular origin. On examining this chest with the fluoroscope during quiet breathing nothing abnormal was noted. The phrenic levels and contour seemed to be normal, the excursions having an amplitude of about 2 cm. (¾ in.).

But when the patient drew a moderately deep inspiration the right side of the diaphragm was seen to halt

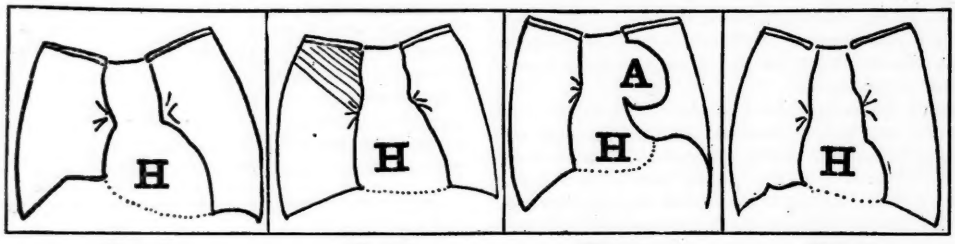


Figure 2. Figure 3. Figure 4. Figure 5.

Fig. 2.—Tubercular consolidation of the right apex. Note the high position of the right dome of the diaphragm and the kink in its contour. The position of the heart is indicated, in all the diagrams, by H.

Fig. 3.—Complete consolidation of the right apex with low, flat position of both sides of the diaphragm, probably due to compensatory emphysema.

Fig. 4.—Large aneurism (A) of the descending arch of the aorta with elevation of the diaphragm on that side, the other side being low and flat.

Fig. 5.—Healed basal pleurisy. Note the small elevation (kink) in the right dome of the diaphragm, due in all probability to a fibrous adhesion.

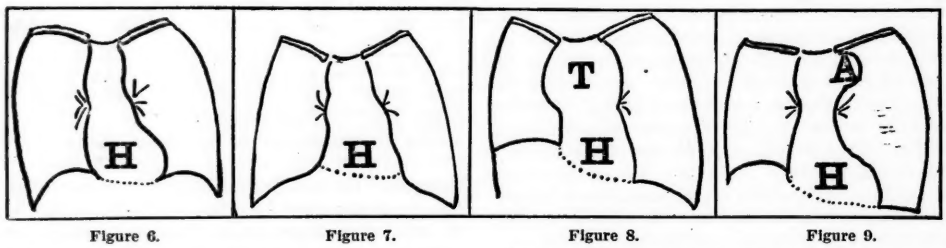


Figure 6. Figure 7. Figure 8. Figure 9.

Fig. 6.—A normal chest of a young adult.

Fig. 7.—Chronic pleuropericarditis. This plate shows a flattening of both sides of the diaphragm with the obliteration of the cardiophrenic angles (compare Fig. 6).

Fig. 8.—Mediastinal sarcoma (T), causing elevation of right side of diaphragm by pressing on phrenic nerve.

Fig. 9.—Aneurism (A) of the descending arch of aorta with low, flat position of the diaphragm on that side.

4. The Roentgen Rays in Diagnosis of Diseases of the Chest.
5. Amer. Jour. Med. Sciences, 1897, p. 665.

suddenly in its downward sweep and become fixed at this level, and the small angular projection, well shown on the plate, appeared to rise up from the right dome of the diaphragm and increase in size as the inspiratory effort continued. The left side of the diaphragm continued its downward excursion uninterrupted. The sudden stoppage in the movement of the right side of the diaphragm, with a kinking of its contour, can be explained only by the assumption that old adhesions between the lung, pleura and diaphragm have resulted from the previous pleurisy, and by their contractions have limited the play of the diaphragm.

It has been shown that limitation of the phrenic excursion is a frequent and early accompaniment of incipient phthisis and that the play of the diaphragm is an important factor in determining the prognosis of any given case. If the action of the diaphragm is ample the prognosis may be considered hopeful, even though the tubercle bacilli are already present in the sputum.

The relation of the diaphragm to the ribs and heart is of great diagnostic import. On the skiagram of a normal chest (Fig. 6) the cardiophrenic and costophrenic angles are seen to be clear cut and acute. Pleural effusions will gravitate into the costophrenic angles and obliterate them. Adhesions may do likewise. The cardiophrenic angles are altered by pericardial effusions and indurative processes involving the pericardium and mediastinal structures. Figure 7 shows such an alteration in the cardiophrenic angles, both of which have become quite rounded out and obtuse.

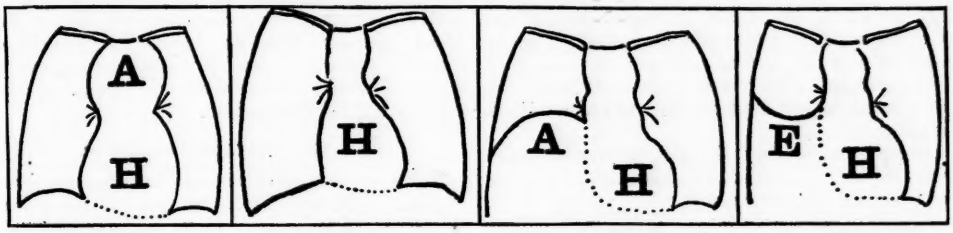


Figure 10. Figure 11. Figure 12. Figure 13.

Fig. 10.—Large aneurism (A) involving entire arch of aorta without altering the phrenic relations.
Fig. 11.—Bilateral emphysema. Note the low, flat position of both sides of the diaphragm and the angularity of the left side.
Fig. 12.—Subphrenic abscess (A). Note the high position of the right dome of the diaphragm and its convex upper border.
Fig. 13.—Pleural effusion (E) in right chest. Note its concave upper border of the effusion.

INTRATHORACIC TUMORS.

Some alteration in the phrenic level is a very constant accompaniment of intrathoracic tumors. The commonest change is an elevation with more or less immobility of that side of the diaphragm toward which the tumor bulges (Figs. 4 and 8). But not infrequently, and especially when the tumor is small, there is a depression of the diaphragm on the side toward which the tumor bulges (Fig. 9). Such an alteration of the phrenic contour in these cases may, of course, be a coincidence due to the coexistence of old adhesions or fibrosis of the lung. But its relative frequency would suggest that the tumor has in some way brought about a dynamic change in the chest cavity, the nature of which is not clear. I wish to call attention to this association of unilateral phrenic elevation or depression with intrathoracic tumors (especially aortic aneurism) as an observation which has not hitherto been emphasized.

The most reasonable explanation for this phenomenon would seem to be phrenic nerve involvement. In those cases in which the diaphragm stands high, and they are usually early cases in which the tumor is not large, we may presuppose an irritation of the phrenic nerve by the tumor mass and a consequent depression of that side of the diaphragm. In those cases in which the diaphragm stands high the tumor is usually a very large one, and phrenic nerve paralysis due to pressure exerted by the tumor may well account for the high immovable diaphragm.

That a large aneurism or other tumor may, however, exist in the chest without in any way disturbing the diaphragmatic relations is shown in Figure 10.

PRACTICAL VALUE OF THE STUDY.

The practical application of the study of the diaphragm by means of the *x*-ray will be possible perhaps only in the larger hospitals where the Roentgen equipment is complete. But its importance as a routine method of examination is not an inconsiderable one. In feeble patients where auscultation is difficult because the breathing is weak and suppressed and percussion is unsatisfactory because of the inadvisability of turning and lifting the patient, this method is especially valuable, for the examination may be conducted in the recumbent position without in any way disturbing the patient.

The high convex position of the diaphragm is dependent on the combined action of two forces. When either fails the dome drops downward. One factor is the elasticity of the lungs, maintaining a constant suction in the pleural sac. The other is the pressure of the abdominal contents. This abdominal pressure is of a hydrostatic nature, in that it is equally distributed over the entire lower surface of the diaphragm. This pressure is due, in the upright posture, to the compression exerted by the abdominal musculature on the abdominal viscera, while in the recumbent position the abdominal contents influence the diaphragm by gravitating against it.

That the above mentioned forces support the diaphragm is shown in phrenic paralysis where the diaphragm stands at a high level and rises during inspiration and sinks during expiration (paradoxical excursions), although its own tonus is lost. That there is an upward suction and an upward pressure on the diaphragm is shown in phrenic hernia where the stomach enters the thorax through a rent in the diaphragm. When the elastic suction of the lung is removed, as in emphysema (Fig. 11) the diaphragm stands low.

FACTORS INFLUENCING THE PHRENIC LEVEL.

Variations in the pressure from below are shown by variations in the phrenic level, depending on whether

the individual is lying, standing or sitting. The phrenic level (according to Holzknecht) is highest when the patient is recumbent, in which position the abdominal contents, acted on by gravity, push against the diaphragm. When standing the diaphragm is slightly lower than when lying down. The force here is the rigidity of the abdominal walls exerting pressure on the viscera, which force is partly counteracted by gravity pulling the abdominal contents away from the diaphragm. In the sitting position the diaphragm is lowest, for in this attitude the abdominal musculature is partly relaxed and the force of gravity acting on the abdominal contents less opposed sucks the diaphragm downward.

The diaphragm functionates in an analogous manner to the other muscles of the body. Its excursion is greatest when its points of origin and insertion are most widely separated, and it acts more forcibly against resistance than when acting unopposed. This has been beautifully shown by Holzknecht[6] on a patient lying in the lateral position (on his side). That half of the diaphragm nearest the table (i. e., the lower half) suffers most of the weight of the abdominal contents and consequently stands higher than the opposite or upper half.

But notwithstanding this pressure, its excursion is greater than the opposite unopposed half. This upper half, furthermore, acts very peculiarly. It stands comparatively low and instead of sweeping up and down with its fellow of the lower side, it remains almost motionless, swinging in a sort of pendulum fashion about an axis which runs through its middle point. In other words, its excursion is decreased because its points of origin and insertion are approximated and because its action is unopposed.

The accompanying outline sketches of original skiagrams were selected at random to illustrate the various phases of abnormal diaphragm relations.

The exposures were made with the patient in a sitting or standing posture, respiration suspended after a moderate inspiration, plate in front, tube behind, target at a distance of twenty inches from the plate. Time, five to fifteen seconds, eight to ten milliamperes of current traversing the tube.

THE CHOICE OF A VASODILATOR AND THE INDICATIONS FOR VASODILATATION.*

HENRY WIREMAN COOK, M.D.
MINNEAPOLIS.

In several recent articles I have asked for greater attention to the use of sodium nitrite as a vasodilator in preference to nitroglycerin and amyl nitrite. The administration of the sodium salt during the past four years in numerous cases where arterial relaxation seemed indicated, and under the control of blood pressure determinations, has graphically demonstrated the efficiency and permanency with which proper doses of sodium nitrite will lower arterial tension. Comparative observations with amyl nitrite and nitroglycerin have invariably proved favorable to the sodium compound. I have made only a limited number of observations with erythrol tetranitrate, introduced by Prof. Bradbury of England, and could demonstrate no advantage over the sodium salt. It is very expensive, a dozen tablets costing one dollar.

Accurate methods of observing changes in pulse tension applicable to clinical usage have done much toward introducing and establishing in medical practice many facts concerning the action of drugs on the heart and vessels which have long since been demonstrated in physiologic work. It is a difficult and tedious process for truths established by physiologic experimentation to supplant the firmly rooted fallacies of faulty clinical observation. Nitroglycerin and whisky are even yet lauded from time to time as heart stimulants, and preparations of the adrenal glands for pulmonary hemorrhage. When, however, the practitioner has the means of accurately following the effects of the drugs he administers, he can break away from the traditional legends which have been handed down to him, and can himself detect the fallacies in the recommendations of some enthusiastic colleague or some enterprising concern.

Any one who had accurately followed the results of alcohol or an active preparation of nitroglycerin would no longer rely on them to raise blood pressure, even though the pulse might "feel" stronger, and a single observation of the powerful blood-pressure raising effect of adrenal preparations would give sufficient warning of their danger in internal hemorrhage or in weakened conditions of the heart muscles. In no instance have accurate clinical methods been of greater value than in defining and broadening the use of vasodilators. Medicinal means of dilating the arterioles and so lowering blood pressure have an important place in general therapy, for a high tension pulse accompanies many chronic diseases, induces severe symptoms, and may precipitate a fatal termination.

THE SPHYGMOMANOMETER.

The use of vasodilators has been greatly broadened by the growing use of some form of sphygmomanometer, or instrument to measure blood pressure, so that the indication may be definite and the action accurately followed.

The first instrument made in the country for the measurement of blood pressure, suited to clinical usage, was my modification of the Riva-Rocci principle, devised from a modification which Dr. Cushing had brought from the Italian clinic to the Johns Hopkins Hospital. I have used the same instrument continually for three years with merely a change of rubber tubing, and believe it is the most practical and satisfactory for the general practitioner, as it is simple, and easier to use at the bedside than the later more complicated instruments. It is now made with an improved wide arm piece.

In the large majority of cases where it is desirable to lower arterial tension, and where dietetic and general measures are inadequate or inapplicable, the desideratum is not to weaken the propelling force, but to lower the resistance. Hence cardiac depressants are not indicated but vasodilators. This is not true in a certain minority of cases, particularly in acute diseases in children where a run-away, overirritable heart needs repression, and aconite may be indicated. In some cases aconite may be used advantageously in conjunction with vasodilators, as especially recommended by Babcock.

Although this paper is devoted to the administration of drugs a word should be said of dietetic and general measures which have the same effects on arterial tension in certain cases as the vasodilator; that is, they tend to lower an abnormal hypertension. Where the

6. Physiol. u. Pathol. d. Atmung, p. 9.

* Read by invitation before the Medical Club of Minneapolis, 1907.

same end can be accomplished by other means without the use of drugs, the latter are contraindicated, and undoubtedly, rest from business and worry, regulation of the amount of water ingested, restriction in amount of food, especially meats, moderate outdoor exercise, etc., will in many cases lower a chronic abnormally high tension. But in acute conditions and in many chronic ones, medicinal aid is valuable.

There are two particulars that we would inquire concerning, in making a selection of a vasodilator: First, its action on arterial tension; second, its general or systemic effects. I shall consider these points in succession.

ACTION OF SODIUM NITRITE ON ARTERIAL TENSION.

The action of sodium nitrite on arterial tension is shown by physiologic as well as by clinical observation to be invariably toward lowering the existing tension, which lowering, except in cases of organic changes such as arteriosclerosis or great hypertrophy of the vessel walls, seems to be in absolute amount inversely proportionate to the existing tension. That is, we would expect a tension of 180 mm. Hg to be lowered a greater number of millimeters by the same dose than a tension of 100 mm. Hg. Likewise the lowered tension is often maintained over a longer period in high tension cases than in low. This must be remembered in prescribing the intervals between doses. This point is illustrated by charts (Figs. 1 and 2) from a case of cardiac hypertrophy with hypertension and an case of pulmonary hemorrhage in phthisis with low tension. In both cases lower tension was desired.

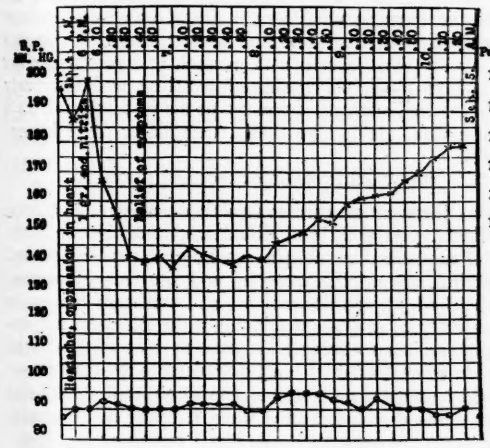


Fig. 1.—Chart illustrating relief of symptoms by vasodilation in a case of hypertension. Male, aged 60, with nocturnal cardiac asthma and cardiac hypertrophy; sounds clear. Urine specific gravity was from 1.015 to 1.020; no albumin at any time; an occasional hyaline cast.

The action of sodium nitrite usually comes in from three to five minutes when administered by mouth, and in about two minutes when given hypodermically, and maintained one to two and one-half hours, the return to previous level being accomplished in from two to three and one-half hours or more, the whole effect when charted being represented by an irregular curve with the convexity downward.

In this action on tension I have found sodium salt far preferable to amyl nitrite or nitroglycerin. The former has its uses undoubtedly in certain very acute conditions where immediate action is desired, as in angina pectoris, but its action is always uncertain in degree, and extremely unreliable, and can never be depended on for effect lasting over one or two minutes. Thus in hemorrhage for instance, the rapid and uncertain changes in tension produced by amyl nitrite might readily do more harm than good, unless the action were continued by the sodium salt.

Nitroglycerin also acts quickly and rather uncertainly, and is of short duration. The uncertainty of its action has led me to make inquiry as to the probable decomposition products of nitroglycerin where the preparation is not perfectly fresh. A letter from the chemist of Wyeth Brothers on this subject is as follows:

As to the exact products of the slow decomposition of nitroglycerin, we believe them to be similar to products formed through spontaneous decomposition of this substance, such as glyceric acid, oxalic acid, hydrocyanic acid, nitric acid, ammonia and various other unidentified products which have been found to result from such decomposition, as contained in the reports of the British Association, 1856. Whether all of these are formed through the gradual decomposition of nitroglycerin in tablet form we do not know, but one or the other, no doubt, will be produced and may be of such a nature as to have toxic effects.

Authorities seem agreed that the sodium salt is more stable, and my own experience seems to me conclusive on this point. The duration of a therapeutic dose of nitroglycerin has not been noted by me to continue longer than one hour. The onset of the action is also sometimes sudden and occasionally alarming.

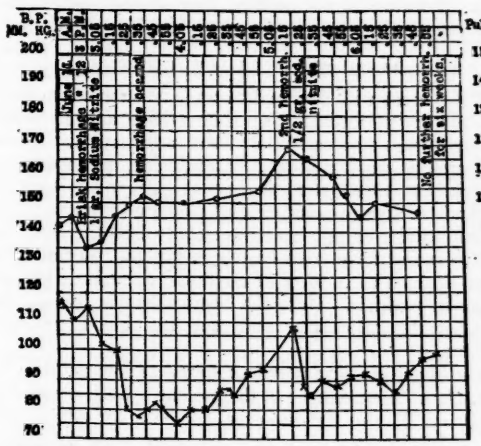


Fig. 2.—Chart illustrating control of hemorrhage in phthisis by vasodilatation.

SYSTEMIC EFFECTS OF SODIUM NITRITE.

A great recommendation for the use of sodium nitrite is the almost entire absence of general effects when given in proper doses. The throbbing, dizziness, flushing, etc., which are often distressing with amyl nitrite and nitroglycerin, are slight or absent with sodium nitrite. This I think only in part arises from the more gradual action, for even when given hypodermically there is no distress. I have never noted the headaches which are not an infrequent accompaniment of continued use of nitroglycerin. I have a patient now under observation who has been taking sodium nitrite for three years off and on with no bad effects whatever. Some days this man, who has high tension and cardiac hypertrophy will not take any nitrite, being guided by his symptoms, but usually he will need one or two tablets of one-half grain each before he can get to sleep without shortness of

breath, etc., on lying down. I have found it most convenient to give sodium nitrite in triturates of one-half and one grain each. They may be given by mouth or hypodermically.

Although the observation of an abnormally elevated blood pressure may be the indication for the use of a vasodilator, this is not essential, for vasodilatation may be indicated with a normal or even a subnormal blood pressure, for instance in internal hemorrhage where the vessel can not be caught and tied. In such cases, as has been repeatedly observed, the hemorrhage will often stop spontaneously when the patient has become so greatly exsanguinated that the very low blood pressure allows a firm clot to form. The advantage to the patient is obvious when this result can be obtained by bleeding the patient into his own blood vessels instead of into the abdominal cavity or a pulmonary vomica. Where vasodilatation is produced and maintained until the danger from further hemorrhage is past the blood has been merely stored in the dilated vessels and can be restored promptly to the circulation by withdrawal of the drug.

In reviewing briefly the indication for the use of vasodilators, I shall group them under two main headings according as to whether they are associated with (1) low and normal tension; (2) high tension.

ASSOCIATED WITH LOW TENSION.

First, cases with low and normal tension where vasodilators are indicated: (a) Hemorrhage uncontrollable by ligature, compression, or local application. Under this would come ruptured extrauterine, postoperative, postpartum and traumatic hemorrhage where surgical methods of ligature, suture and packing may either not be applicable, or may not have controlled the flow entirely; hemorrhage from bowels in typhoid; hemorrhage from stomach as in ulcer or cirrhosis; aneurism; hemorrhage in phthisis. Here the hemorrhage is the indication for the vasodilator and not the blood pressure reading.

The blood pressure may be reduced as low as 70 or 75 mm. Hg without danger to the patient. With a pressure as low as 75 mm. Hg, however, I should not advise further reduction, as a blood pressure much below this point seems to cause respiratory distress through lack of circulation in the respiration center. However, in severe hemorrhages, as is well known, after the blood pressure has fallen below a point at which peripheral pulsation can be felt, the hemorrhage may stop before a fatal amount is lost, and such patients have rallied and recovered even after they had been pulseless.

In operative procedures where control of bleeding is difficult, a lowered tension from nitrite will be found of great assistance. For instance in a Gasserian operation on a man with arteriosclerosis and high tension, the hemorrhage obscured the field and was alarming, but was easily controlled after reduction of the tension. Again in a complete hysterectomy operation as advised by Sampson for carcinoma, the bleeding, encountered deep in the pelvis, was uncontrollable until the tension was lowered nearly 50 per cent.

In the treatment of aneurism the formation of a clot is favored by a low tension, and where the sac is wired, an induced low tension tends to lessen the danger from embolus—as well as to hasten the formation of a clot. I should further advise the use of vasodilators in cases of venous thrombi as the lowered tension would also here lessen liability to embolus.

ASSOCIATED WITH HIGH TENSION.

Conditions accompanied by a high tension pulse are rapidly coming into greater prominence, and are more frequently brought to the notice of the practitioner. This increased prominence is, in my opinion, due to both an absolute increase in the frequency of the condition, as well as greater frequency of recognition due to improved methods of observation. The more general use of the sphygmomanometer has produced a more frequent recognition of the high tension pulse, but *pari passu* with the increasing strain of modern professional and business life, there is a simultaneous increase in physical strain, and this is particularly shown in the cardiovascular system by high tension pulse. As an example of a not infrequent condition I will cite the case of one of our great financiers who on the eve of a desperate attempt to corner the market, applied for $1,000,000 insurance to cover some loans. At the medical examination, a high arterial tension and accentuated second sound were the cause of a rejection. This man wisely abandoned immediately his financial operations, and went to Europe for a complete rest for six months, and was offered on his return to America all the insurance he wished. The vast majority of cases never receive the warning until serious organic changes produce symptoms, and then rest and proper mode of life can not always effect a return to normal, and recourse must be had to medicinal means of averting a dangerously high tension, with an apoplexy or acute dilatation as a termination. It is here that a vasodilator must be employed.

INCREASE IN CARDIOVASCULAR DISEASE.

The three great cardiovascular diseases: Apoplexy, cardiac hypertrophy and dilatation, and chronic interstitial nephritis, which play so large a part in general mortality, are on the increase, and they are all accompanied by high arterial tension, and this high tension in a majority of the cases antedates the disease, and undoubtedly is an etiologic factor; so that high arterial tension when found without discoverable organic disease should be treated as a serious condition, and should also be recognized and corrected when it exists in connection with organic disease of heart, blood vessels or kidneys.

In heart and kidney cases, the mere reduction of an abnormally high tension will often produce the most striking and satisfactory results; that is, if the tension can be lowered, the dyspnea, sleeplessness, anxiety and cardiac pains are often greatly relieved or removed: The headache of kidney disease, often one of the most distressing symptoms, is alleviated, and in some cases the amount of albumin markedly reduced. There can be no doubt that a reduction of high tension in chronic heart or kidney cases is attended with greater relief and general improvement than follows any other single measure.

A word of warning, however, is timely here. This reduction, especially where there are severe renal changes, should not be accomplished too rapidly, nor be carried too far. It must be remembered that probably in certain sclerotic kidney cases the high pulse tension is a physiologic compensation on the part of the arterial system to offset the inability of the kidney to function except under pressure, and where the compensatory action is inhibited by arterial dilatation, the kidney is unable under lower tension to function, and the water may fill pleural or pericardial sacs or bronchial tubes, and the retained waste products may induce coma; so that

when there is severe kidney involvement the reduction should be slow and carefully watched, and accompanied by very free evacuation of bowels. One other word of warning: A lowered tension often brings with it a feeling of lassitude and weakness, which possibility should be explained to the patient, so that he may not misunderstand it and feel that he is worse because he does not feel as strong as when living with a dangerously high tension.

There is no indication, however, for vasodilatation merely because Bright's disease has been diagnosed from urinary findings, for this disease may exist without any increase in arterial tension, in spite of the extreme position of certain authors claiming hypertension as the causal factor in all cases of Bright's disease. The indications for vasodilatation in Bright's disease depend on the actual demonstration of high arterial tension by the sphygmomanometer, and the amount and frequency of the dose depend on the individual effect in each case.

No case of cardiac, arterial, or renal disease should be treated without the use of the sphygmomanometer, as to attempt to regulate arterial tension without any knowledge of its degree or its action under treatment, is to work in the dark. One-half grain of sodium nitrite is a safe initial dose in an untried case, and a three-hour interval between doses. The adjustment of dose and interval must be made in each case by use of the sphygmomanometer.

SUMMARY:

1. Sodium nitrite is the best vasodilator; it has the most enduring effects; is most stable and dependable; gives rise to fewest unpleasant symptoms.

2. Vasodilatation may be indicated with low or normal tension: *i. e.*, all uncontrollable hemorrhage, either: During operative manipulation; typhoid ulceration; gastric ulcer; pulmonary phthisis; other internal hemorrhage uncontrollable by surgical methods; aneurism; thrombus, etc.

3. High tension is abnormal, and is either the accompaniment of organic disease, or else presages its onset; in either case it demands treatment: first, by general hygienic measures; second, when necessary, by venesection or vasodilatation with drugs—preferably sodium nitrite.

PROSTATIC CALCULI.

WITH THE REPORT OF TWO CASES.

G. L. ROHDENBURG, M.D.
House Physician, German Hospital.
NEW YORK CITY.

It is a well known fact that in some way altered prostatic secretion often forms concretions. According to Virchow, and to Morgagni before him, there is a proteid in the prostatic secretion which when present in excess is precipitated in the acini of the gland forming these concretions. The concretions in some instances start up an inflammation of low grade with an excess secretion of mucus. The epithelial detritus, together with the mucus and concretions, forms the nucleus for the deposit of mineral salts forming the calculi. They may be present in any or all parts of the gland. They may be single or multiple, and in a few cases the gland may be so filled with plates of calculi as to give the sensation of one stony shell. In size they vary from a millet seed to a peach pit. They are usually rounded, and when there are many in the one common sac they are often facetted. At times they form regular stony plates as above stated.

A typical calculus is stony hard, without distinctive odor, and ranges from light brown to dark blue in color. At times calculi resemble porcelain because of their high polish. Sections through them show the larger ones to be formed of distinct lamellæ. Chemically they are composed chiefly of the phosphate and oxalate of lime, together with a nucleus of organic matter. The phosphate of ammonium and magnesium has also been found. In those passing into the bladder or lying in a sac in contact with urine the usual salts of vesical calculi are also found. The following are two quantative analyses:

Lassaigne.....	Phosphate of lime.....	84.5
	Carbonate of lime.....	0.5
	Organic matter	15.0
Dupuytren.....	Phosphate of lime.....	60.
	Phosphate of ammonium and magnesium..	20.
	Carbonate of lime.....	20.

Dupuytren in 1820 was the first to give an accurate description of the condition. The symptoms of prostatic calculi are insidious in onset and the condition is not easy of diagnosis. The majority of the cases reported have been found accidentally. The symptoms are those of a composite picture of vesical calculi and hypertrophied prostate with points of differentiation. The true prostatic calculi occur almost entirely in the young adult, the ages of the cases reported averaging 28 and the extremes being 23 and 30. One may be able to obtain a history of gonorrhea in almost 40 per cent. of cases.

THE SYMPTOMS.

As a rule the first complaint of a patient is that of a sense of fulness in the perineum, together with a burning stinging pain at the end of micturition. Gradually the patient then notices a delay in starting the stream, which difficulty increases with the duration of the case. Shortly after this dribbling at the end of micturition, together with frequent urination, is noticed, and about the same time pus is found in the urine. Defecation becomes excessively painful and when the stool is hard causes sharp darting pains in the glans penis, and testes.

Often on violent effort to lift this same pain comes on, caused by the compression of the abdominal contents against the perineal floor. Priapism of several days' duration has been described in two cases. In several cases frequent emissions have been the sole complaint of the patient, the condition being discovered on physical examination. Temperature of 100 or 101 F. is often present, but uncomplicated cases do not develop septic temperatures or chills. If the case has any of the complications to be mentioned below the symptoms of the particular complication are of course added.

The objective symptoms are the ones on which the differential diagnosis is made. Rectal examination reveals a very much enlarged, exquisitely tender, stony-hard gland. Moderate, and sometimes light, pressure of the examining finger gives the sensation of crepitus and causes exquisite pain. Perineal examination may reveal a tender mass or not, according to the degree of enlargement. The urine is that of a cystitis—ammoniacal, full of pus and occasionally containing blood. Sounding the urethra reveals nothing until the prostatic portion is reached, when a sensation as if passing through a bed of gravel is experienced. The Roentgen rays may also be used as an aid to diagnosis. The cystoscope, aside from its use as a sound, reveals only the picture of a cystitis more or less acute.

In summary then the symptoms are those of an enlarged prostate and a vesical calculus. It differs from an enlarged prostate in the crepitus obtained per rectum and by sounding, and from vesical calculus by the fact that the pain is constantly referred to one point and that the sensation of a moving stone is not experienced.

The sequelæ and complications of the disease are not numerous. The calculi may perforate into the bladder, rectum or perineum. The constant irritation with lessened tissue resistance may be the cause of prostatic abscess. Lastly, but most important, the consequences of a neglected hypertrophied prostate or vesical calculus may follow, namely, pyelitis, pyonephrosis, sepsis and death.

TREATMENT.

The treatment of the condition is essentially a surgical one, the removal of the stones by open operation. Any of the accepted incisions for perineal prostatectomy will do. In my case reported below, operation was refused and the mechanical measures employed were so successful that they will be given in detail. The prostate should be massaged daily with gentle touch for about two minutes. Gradually the pressure can be increased, but if fever should follow massage should be omitted for a day or two. Massage mechanically presses into the urethra the calculi and from there they are voided with the urine or, becoming impacted, can be extracted with urethral forceps.

This method is not without danger, for if Finger's theory as to the shape of the bladder opening into the urethra when that viscus is distended be accepted, a calculus may readily slip back into the bladder. It would then form the nucleus for a vesical calculus, a not very pleasant consequence. At the same time suppositories of ichthyol can be given to allay the acute inflammation. The cystitis is to be treated by any of the approved methods, i. e., bladder irrigations and urinary disinfectants.

The following case occurred in the service of Dr. Hermann Klotz at the German Hospital and I am indebted to him for the permission to report it:

CASE REPORTS.

CASE 1. *History.*—J. B., male, aged 23, plumber, was admitted July 10, 1907. Past and family history negative. Had gonorrhea four years ago and was cured in three weeks; denied syphilis and chancroidal infection. Four months before admission he had a second attack of gonorrhea that was treated for six weeks with astringents and protargol, at which time the discharge ceased. The urine was still full of pus and after ten days' frequency of urination returned, but no urethral discharge. Frequency of urination persisted together with increasing difficulty in starting the stream and dribbling at the end of the act. He had a sense of fulness in the perineum and severe pain on defecation, the pain radiating to the glans penis.

Examination.—His condition on admission was as follows: Micturition every fifteen minutes and very painful. Urine full of pus and foul smelling. He had passed no calculi. Aside from the genital tract the patient was normal. Penis was normal, no scars nor discharge. Mucous membrane, as seen through endoscope, was normal. A No. 30 Fr. sound passed easily. Just before passing into the bladder crepitus was felt at the end of the sound. Cystoscopy showed the bladder to be acutely inflamed. There were 150 c.c. of residual urine. A Roentgen ray picture was not taken. On rectal examination the finger, immediately after passing the sphincter, was arrested by a rather firm, round, smooth prominence of about the size of a small lemon, which protruded from the anterior wall, apparently the enlarged and hardened prostate gland. On stronger pressure with the finger one got the impression of a rather hard but thin shell giving way and breaking into fragments, followed by the distinct sensation of crepitation. This sensation was not, however, that of the rubbing of hard stones against each other, but rather that of fragments of layers of a soft slate or shale. Altogether the gland seemed almost entirely composed of or interspersed with numerous layers of soft stone or with incrustations. Laboratory reports on the blood were negative. The urine was that of a severe cystitis. While in the hospital he had a temperature ranging from 100 to 102.6 F.

Treatment.—His treatment and the further course of the case were as follows: He was given hexamethylenamin and bladder irrigations of silver nitrate up to a strength of 1 in 1,000, and his prostate was massaged. After the first massage he passed two fragments of calculi and the next day two more. The fourth passed was the largest of the series and weighed 3 grains. After this he had a temperature of 102.6 F. and massage was omitted for a day or two. He continued to pass from one to three stones a day. At the end of fourteen days he could hold his urine four hours, had slight pain on voiding and none on defecation. Rectal examination showed the prostate to have numerous areas of softening. He continued to pass calculi for two weeks, and with their passage his symptoms gradually improved. At the end of a month he was discharged with the following status: Urine still cloudy, with some shreds. Prostate barely palpable per rectum; no crepitus. Sound on passing into the urethra gave no crepitus. He was able to hold his urine for eight hours and had no pain either on defecation or micturition. There was no residual urine.

Pathologic Report.—The calculi were examined by Dr. O. Hensel of the German Hospital Laboratory, and his report was as follows: "The calculus submitted for examination consisted chiefly of carbonate of lime with some phosphate of lime and a slight amount of organic matter." In all fifty-two calculi were passed, ranging in size from a pinhead to a big grain of corn. All were not saved, but from those preserved their estimated total weight was about 100 grains.

CASE 2.—From the practice of Dr. H. Klotz.

History.—A. L., aged 26, was under my observation and treatment during the winter of 1892-1893 and during the spring of 1893 for frequent emissions, which always left the patient in a rather weak and nervous condition. On account of an advanced endarteritis and incidental heart affection, he was not able to follow treatment very regularly, but altogether local treatment by sounds; the psychrophore, etc., did not seem to have much effect; bromids gave temporary relief. On July 22 the patient particularly complained of having had several seminal emissions in quick succession, followed by severe burning in the urethra, frequent and urgent desire to urinate and occasional interruptions of the act of micturition.

Examination.—On examination through the rectum the prostate appeared moderately enlarged and prominent, but as a whole rather soft except in one spot where a hard, irregular nodule or tubercle could be distinctly made out. The examination was very painful, the pressure on the gland was not followed by the discharge of any secretion, the urine was but slightly cloudy, and no symptoms of kidney affection were present. On July 27 urination was still very painful, with frequent desire and occasional interruptions. On August 5 the patient reported that the previous night, after several days with rather moderate symptoms, an exceedingly severe, sudden pain was felt in the region of the prostate and throughout the urethra; after micturition a hard body was discovered in the chamber; this the patient had brought with him. It proved to be a concrement of about the shape and size of the stone of the date and of a light brown color; it measured 1.5 cm. in length and 0.5 cm. in the smaller diameter, tapering into rather sharp points at both ends. Broken in two pieces, the concrement showed a thin crust of a light brown color surrounding a somewhat softer substance of a light gray and partly distinctly crystalline structure. August 10 examination of the patient through the rectum was not painful, the prostate was much reduced in size and not painful on pressure; the hard nodule had entirely disappeared and this correspond-

ing portion of the gland was soft and could be impressed, indicating the existence of a small cavity; however, not much secretion could be expressed. The urine was perfectly clear; there were no subjective symptoms present, but the seminal emissions did not show any perceptible diminution of frequency. On August 17 a steel sound, No. 28 Fr., was introduced in the bladder without any difficulty. On account of the condition of the general health the patient went into the country immediately afterward, and I have neither seen him again myself nor have I been able to get any further information in regard to his condition from his then family physician.

The literature on the subject is not very profuse. The following cases have been collected. The authority, number and weight of the stones and under what conditions found are given:

TABLE OF CASES OF PROSTATIC CALCULI.

Authority.	No.	Size and weight.	Remarks.
Berand	35	Not given	Found at autopsy.
Bird. Golding	130	Not given.	
Chopart	69	Millet seed	Spontaneous evacuation.
Cooper Astley	84	Not given.	
Caspar	1	Size of pea	Autopsy.
D'Altona	1	40 gms.	Operation.
Erdmann	50	Millet seed to pumpkin seed.	Operation.
Ferreri	1	120 grs.	Operation.
Gogrund	100	Not given.	
Longut	1	Right lobe of gland size of peach pit.	Autopsy.
Louis	6	Not given	Operation.
Malteste	4	Not given	Operation.
	22	Not given	Operation.
	30	Not given	Operation.
	1	33 by 38 by 8 mm.	Operation.
Mander	50	Not given	Operation.
Marcat	100	Not given	Operation.
Marssmeu	2	10 grs.	Operation.
Nelaton	1	Entire right lobe	Autopsy.
H. Thompson	20	Not given	Operation.
Voillennir	1	Plum-pit	Autopsy.
White	10	230 grs.	Spontaneous.

112 East Seventy-seventh Street.

THE HEART'S ACTION PRECEDING AN EPILEPTIC SEIZURE.*

J. F. MUNSON, M.D.
SONYEA, N. Y.

The etiology of epilepsy has been a subject of comment and investigation from the most ancient times to the present day, yet but little light has been shed on its mysteries. The recognition of the cortical origin of the convulsion, and, more important than this, the new viewpoint being adopted by epileptologists, which regards the convulsion or other paroxysmal manifestation of the disease as the symptom and not as the disease iself—these have been the most important steps in advance.

Out of the recognition of the symptomatic character of the attack has grown the idea that the disease is not a unit—is not due to the same cause confined to the same part of the body in every case. Instead, it may be said that every case is an epilepsy by itself; certain it is that there will be found to be several epilepsies.

In regarding the disease as a group of conditions, and not as a unit, we have to meet this question: How do different causes acting on the same cells bring forth the same action? Do they act directly or do they act indirectly through some condition produced by all in common?

Dr. Albert E. Russell, of London, has discussed this question[1] and answered it by suggesting cerebral anemia as a common condition produced by all the underlying causes of the seizure. Dr. Russell suggests that arrest of the heart's action may in some cases be the immediate cause of the anemia, the arrest taking place just before the onset of the convulsion, *i. e.*, before consciousness is lost and muscular contraction sets in, the failure to pump blood producing the anemia of the brain. In support of this assumption he cites cases, and I may be permitted to briefly summarize the material he presents:

He first quotes two cases (p. 42) with slow pulse, in which convulsions were preceded by cessation of the heart's action. His third case is one in which subacute rheumatism had set in. Benham, the attending physician, was informed one morning that the patient had had several fits, and while taking the pulse it stopped and a convulsion set in. This was repeatedly observed. The urine after these seizures contained albumin, but this soon subsided. The fourth case, in which myocardial disease seemed absent, was reported by Webster. Cessation of the pulse, shown by sphygmographic tracings was accompanied according to duration, by sleep or convulsion.

Russell next quotes a case of cardiac dropsy, and one of uremia (both Moxon's), in which severe epileptic convulsions were preceded by stopping of the heart's beats. A case of epilepsy, also Moxon's, in which cardiac arrest was observed, is mentioned. Dr. Hughlings-Jackson has observed the same thing in petit mal seizures. Dr. Russell reports one case from his own experience and gives the description of another which was reported to him. He concludes:

> Sudden cardiac arrest is one of the few possible causes of anemia of the brain. It has been shown that such cardiac arrest does occur in some cases of epilepsy, and it is suggested that this occurence may be much more common than is generally assumed, and that the rarity of opportunities for making such observation may explain the fact that it is not more widely recognized.

This article and another[2] by the same author attracted my attention. The phenomenon observed and held to be the cause of the seizure is so simple and so easily observed that it seemed strange that it had not been noted before. Taking together the heart auræ present in some cases and the favorable action sometimes exhibited by digitalis in epilepsy, it did not seem improbable, especially when one considers the rarity of opportunities for observation, as indicated by Dr. Russell, that cardiac arrest might frequently be present.

THE AUTHOR'S METHOD.

This suggestion, so simple and yet so important if susceptible of confirmation, has led to the present piece of work, which has consisted of obtaining graphic records of the pulse of epileptics previous to the seizure. Some six months has been spent in the work which, requiring the observation of the beginning of the seizures, even where material is exceedingly plentiful, is of the greatest difficulty. The time of the next seizure can not be foretold in any case, even approximately, and in order to obtain records it has been necessary to observe cases continually for hours and days at a time, a process which is tedious and laborious in the extreme. Casting aside digital palpation as a physical impossibility, the author arranged an air transmission apparatus whereby the pulsations in a constricted limb were transmitted to a tambour recording on blackened paper. A Janeway sphygmomanometer cuff was applied to the arm of the patient and inflated to some suitable pressure, recorded by a mercurial thermometer. The pulse waves in the

* From the Laboratory of the Craig Colony for Epileptics.

1. Transactions of the National Association for the Study of Epilepsy, vol. iv.

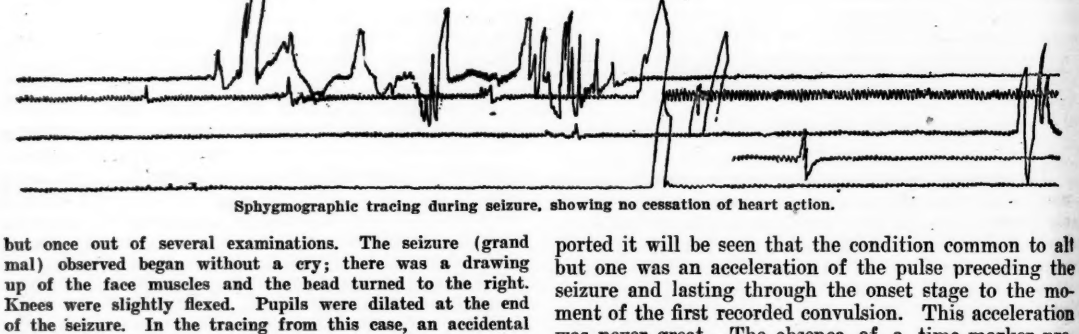
2. Lancet, July 21, 1906.

arm were transmitted through the cuff and heavy connecting tubing to an expansile pouch of rubber, inclosed tightly in a glass funnel, which is connected with a tambour. The kymograph used takes a blackened record about seven feet in length, so that a whole day's record may be traced on one band.

I regret very much that no time recording device was available for the work. Nevertheless, I am sure after several months' experience with this particular kymograph that its motion is practically regular—sufficiently constant for the work of this paper. The cases observed were taken at random, except that a few were selected because of heart lesions. The patients were observed lying in bed, sometimes bolstered up with pillows in any attitude comfortable for them. In reporting the observations on the cases I will give a short history of each case and then describe the findings.

CASE 1.—*History.*—Male, aged 23. Grandmother a paralytic. Onset of epilepsy at 14 without assigned cause. Physical examination negative. Two tracings were obtained in this case. There was a very slight acceleration preceding the attack. After the seizure the pulse was regular and still slightly accelerated. In the second of these tracings the seizure began some fifteen pulse waves before the first muscular contraction is recorded. In the first the period was some two or three pulse waves shorter.

CASE 2.—*History.*—Male, aged 33, a printer by trade. Had been deaf since eight years of age. Onset of epilepsy at 25. Assigned cause, careless habits of eating and sleeping. Denied the use of alcohol; used tobacco moderately. Palate and chest asymmetrical; heart negative; dermographia. HCl present but once out of several examinations. The seizure (grand mal) observed began without a cry; there was a drawing up of the face muscles and the head turned to the right. Knees were slightly flexed. Pupils were dilated at the end of the seizure. In the tracing from this case, an accidental movement interrupted the curve before the attack, but about eight occurred before the beginning of the seizure. After the onset there was apparently a momentary slowing, but this disappeared and the waves were still closer together as they approached the first muscular contraction. The rate after the seizure was about the same as before.



Sphygmographic tracing during seizure, showing no cessation of heart action.

CASE 3.—No. 1871. Male, aged 25. Onset of epilepsy at 9, following scarlet fever and Bright's disease. Heredity negative. Thorax negative; dermographia present; some asymmetry of facial markings and atrophy about the shoulder girdle, especially in the supraspinatus and infraspinatus muscles. Mental condition fairly good.

The record of a grand mal attack is shown in the accompanying illustration. The tetanic convulsion was of considerable duration, the eyes were turned up and to the right and the pupils were dilated. The clonus was short. The tracing shows slight acceleration after the muscular contraction is recorded, and during and after the convulsion the heart rate is still more increased.

CASE 4.—No. 2107. Male, aged 26. Heredity poor. Pneumonia at 1 year of age. Onset at 1 year. Patient has had muscular rheumatism and has a presystolic murmur. Pulse regular.

Two records were taken—one of a grand mal attack, and one of a petit mal. In the first there appeared to be acceleration of the pulse rate before the attack, and in the second there was no change.

CASE 5.—No 1580. Male, aged 13. Onset at 14 months. Physical examination negative. In several tracings of petit mal attacks no change of rate preceded the seizure.

CASE 6.—No. 1779. Male, aged 31. Heredity poor. Onset at 19. Mitral regurgitation. Records were taken of four seizures, petit mal or mild grand mal in character. In one, there was no change in rate, but in others there was acceleration just before or just after the onset. The indicated onset preceded the first muscular contraction.

CASE 7.—No. 846. Male, aged 22. Mother suffered from severe headaches. Onset at 10, supposed cause a fall five years previously. In the tracings of two grand mal attacks, the first showed slight acceleration before the convulsion begins, and the second showed no change.

CASE 8.—No. 939. Male, aged 18. Onset at 8 years of age. Heredity poor. Worm fits at 2 years. I have only the record of a petit mal attack. There was only a slight acceleration.

CASE 9.—No 1004. A Jacksonian case, with almost constant clonic movements of the affected side. The tracings showed intervals in the convulsion during which the pulse was regular up to the point where resumption of convulsion hid the pulse wave in the tracing.

CASE 10.—No. 1524. Marked mitral insufficiency. Numerous mild attacks were traced in which the pulse was regular up to the moment of convulsion. Two other tracings showed no change in rate before the convulsion.

These cases, chosen at random or for a short heart lesion, may be considered to represent the average of epileptics. Looking over the results of the work reported it will be seen that the condition common to all but one was an acceleration of the pulse preceding the seizure and lasting through the onset stage to the moment of the first recorded convulsion. This acceleration was never great. The absence of a time marker prevented exact statements, but the increases seemed to be in the several cases, from eight to nine, or from twelve to fifteen or seventeen beats. In all the cases the pulse was entirely regular.

For this group of cases one can conclude definitely:

First—Cardiac arrest does not occur.

Second—Except for slight acceleration, and in one case slight slowing, the heart does not take part in the convulsion.

While I am certain as to the accuracy of the above stated conclusions, the question as to the extent to which they apply to all epilepsies is a different matter. It seems to me, however, that it is doubtful if cardiac arrest will be found in cortical epilepsies uncomplicated by heart lesions.

Handle a Few Tools Well.—Don't try to have too many remedies or combinations of remedies; it is better to have a few tools which one knows how to handle well, than to have a vast number with which one is poorly acquainted.—Dr. L. Duncan Bulkley in *Therapeutic Gazette.*

STERILE HANDS SECURED BY ABSTINENCE FROM INFECTION: THE ESSENTIAL FACTOR IN SUCCESSFUL SURGERY.*

J. H. CARSTENS, M.D.
DETROIT.

For many years it has been known that puerperal sepsis could be carried by the obstetrician from house to house, and it was made a rule that an infected physician or midwife should not practice for six weeks. This stand was taken, in the course of time, by the profession as the result of experience, before there was any real knowledge of the causal relation of bacteria to infection. This rule of the old practitioners, based on long observation, has been proved correct in later days when the real causes of pathologic conditions were more thoroughly understood.

Things have changed in the last thirty years, since we have been able to demonstrate the bacterial origin of many diseases, and especially since Lister called attention to the cause of surgical failures. We still have septic infections of various kinds, however, and every possible precaution is taken to avoid them. We have a clearer understanding of the human body and its power of resistance, and we make use of that.

Experiments of every kind have been made to get the patient's body in a sterile condition. One of the great stumbling blocks to our success has been the lack of sterile ligatures and instruments, but that seems to have been removed. There is no trouble now in making instruments sterile by boiling, and rendering silk and silkworm-gut sterile by the same method. The problem of sterilizing catgut and tendons has been a difficult one, but a number of well-known processes now employed have enabled us to use absorbable ligatures that are absolutely sterile.

Only one problem remains and that is to make the hands sterile. This has been the greatest problem, and thousands of experiments have been made throughout the world to devise a means of absolutely sterilizing the hands. So far as I have been able to learn, that has been accomplished to a considerable extent; still, all experimenters admit that no matter how the hands are made sterile bacteria of some kind can still be demonstrated.

When abdominal surgery was developing I gave up both my general and obstetric practice because it seemed to me that a person who did general practice, who came in contact with all kinds of contagious diseases, could not do good abdominal surgery, nor would he have enough rest, by being in general practice, to do good work. And, furthermore, he would not be able to do that amount of studying and reading along this one line alone to keep abreast of that branch of surgery. For these various reasons I have always held that a man should limit his practice to this one particular branch. It seems to me that the man who handles all kinds of infected wounds, treats piles and venereal diseases, cases of puerperal sepsis, scarlet fever, diphtheria, etc., can not keep his hands as clean as he should, to do abdominal surgery.

For a good many years I have practiced and taught that abstinence is the only way in which the hands can be kept clean; that no matter what method, of the many complicated means that have been advised to sterilize the hands is employed, the hands never can be relied on. No matter what means are used we still get cultures from the so-called sterilized hands, and the surgeon occasionally infects the patient. We may not be able to demonstrate the infectious material by cultures, but will have infection just the same. I have claimed that there is something or other—spores or whatever it may be—that are not reached, but that, during the course of an operation, especially a long one, they are loosened and planted in the patient's wound.

I have also noticed for a long time that if there is a case of erysipelas in the hospital, no matter what care is taken, there is always a great deal more sepsis than there is at other times, so that we have made it a rule not to accept erysipelas cases at Harper Hospital; and if by some chance, once in a great while, a case develops in the hospital, the patient is immediately removed, isolated, and the most vigorous disinfection is instituted.

In order to overcome some of the difficulties mentioned the profession has tried the use of gloves. Different kinds are recommended and are even being used now. We have finally drifted to rubber gloves. These can be reasonably sterilized by boiling—although the ideal method would be to use a new pair for every operation. They are expensive, but I think a new pair should be used for every "clean" case of abdominal section, and for infected cases we might take gloves that have been used but have been carefully sterilized in boiling water. Rubber gloves, when they are very thin, and thus do not affect the sense of touch, easily tear, and then their usefulness is lost. If they are heavier, they interfere with perfect work, so that there is considerable objection, in my mind, to the use of gloves.

I have always held to the doctrine that, at operations, the shorter time the patient is under the anesthetic, the less shock and the greater the power of resistance. This point, it seems to me, has been established so thoroughly that there should be no question about it. This talk that the work should be done slowly and carefully is only a subterfuge; the work can be done deliberately, very carefully and very accurately, and still with great rapidity, if the surgeon knows what he has to do and is always ready for his work, no matter what emergencies arise.

This abstinence of the hands from infection can be accomplished by never getting hands or fingers in any place where there is liable to be infectious material. I suppose we can never be absolutely perfect, but we can do a great deal if we try. The way I do it is this: If I have to operate for an ordinary ovarian tumor or a fibroid tumor, or, I will say, do an "interval" appendectomy or a gallstone operation, I operate with my bare hands. I open the abdomen, and if I then suddenly find something that I did not expect—a quiescent pus tube, complicating the ovarian or fibroid tumor—or if I find that the appendix has ruptured and is walled in and lying in a puddle of pus; or if I find that I am dealing with tubercular peritonitis or a malignant growth—in all these cases I immediately stop, turn around to a basin containing gloves and put them on—which takes about a minute. I then proceed with the operation with gloved hands.

If I have a case of infection that I have previously diagnosticated or am to do intestinal surgery or operate in a case in which there is any doubt, I use gloves from the start.

If we use gloves we depend on them too much. Gloves tear and are punctured during operation, especially if very thin, and if thick they interfere with work—that is, with speed. If they tear, the infection of the hand is carried to the patient, or the patient's in-

* Read before the Mississippi Valley Medical Association, Oct. 9, 1907.

fection contaminates the hand. I doubt, too, if gloves are sterile, or can be made so by boiling for a few minutes in water; certainly many spores require a long time to destroy.

In my work aside from operations I do the same thing. I never examine a puerperal or infected uterus with the bare finger, but always with gloves. I never make a vaginal, rectal or any other kind of examination, never dress a case where there may be an abscess or fistula, or a case that requires drainage, without using rubber gloves.

By this means I think I can keep my hands clean by absolute abstinence. With absolute abstinence and the rapid work that the ungloved hand enables one to do, it seems to me that we would increase our success and reduce our death rate.

620 Woodward Avenue.

TUBERCULOSIS AND THE MEDICAL SCHOOLS.

DAVID R. LYMAN, M.D.
WALLINGFORD, CONN.

The admission of cases of pulmonary tuberculosis to the general hospitals, is one of the most serious questions with which such institutions have to deal. The attitude of those in charge has always been that a general hospital is not the proper place for the care of such cases, and this attitude is held just and reasonable by the medical profession. There is one phase of the question, however, which has received very scanty consideration, but which demands that certain exceptions be made to the general rule. These exceptions have to deal with those hospitals connected with medical schools, which occupy a wider field than the other general hospitals. These hospitals must give the students in their associated schools as complete a practical familiarity as possible with the principal diseases which they will meet in after life, so that they will go out to practice their profession thoroughly grounded in the prevention, diagnosis and treatment of these diseases.

As for affording relief to the patient, and furnishing material for research work, it is readily granted that in pulmonary tuberculosis these ends can be met more adequately through special institutions for the care of these cases. It is quite as much a matter of fact, that for purposes of instruction, no outside institutions can fully take the place of the hospital in whose wards the medical student does his daily work.

It is the duty of these hospitals to afford proper facilities for the instruction of the students in the practical diagnosis of incipient tuberculosis. It is a duty that is being very generally neglected. Cases of typhoid, pneumonia, malaria, and all other diseases met with in the practice of medicine, are urged to come, and gladly welcomed into their wards. Those persons having tuberculosis, the malady to which mankind is most subject, and which presents to the general practitioner the most perplexing and discouraging problem with which he has to deal, are received grudgingly; and then only when humanitarian considerations demand their reception and no cogent arguments can be advanced in favor of their going elsewhere.

Aside from those unsuspected cases presenting in patients admitted for the treatment of some other ailment, the material at the command of the instructors for their bedside clinics is comprised, so far as tuberculosis is concerned, of the comparatively few patients in more or less advanced stages of the disease, who are admitted under the conditions mentioned above. The material thus afforded is used after a fashion, and only after a fashion. Usually there are no special facilities for giving tuberculous patients the treatment they require. From being placed in the general wards, and usually being so far advanced as to afford little hope of real benefit from the treatment there, they are looked on as detrimental to the hospital and uninteresting medically. Aside from the clinics in the dispensary these cases furnish, in a large majority of instances, the sole material on which those in charge must rely for the practical instruction of the students.

When the average graduate receives his license to practice his knowledge of tuberculosis is based almost entirely on the unmistakable signs and symptoms of its later stages. He knows that the presence of the tubercle bacillus confirms the diagnosis, but he does not know that the reverse of this statement is not equally true. He associates tuberculosis far too closely with the picture of emaciation, prostration and extreme dyspnea which he has seen. His knowledge is drawn entirely from the study of its later stages, and though he has gathered from his instructors and his text books some inkling of the varying signs and symptoms of its onset, he has not the idea of their value and significance that is obtained only by practical observation and examination.

Any school that taught its students to recognize appendicitis only after rupture had occurred, or a heart lesion only through the symptoms of failing compensation, would be held up to scorn on all sides. Can any one question the relative importance of tuberculosis to these, or any other diseases? And yet how many such hospitals to-day have any facilities for, or make any effort to obtain incipient cases of tuberculosis in order to give their students ample instruction in the diagnosis and treatment of its early stages, Special facilities for the care of these cases means an extra expenditure, but is it not imperative that they be provided? Frequently such patients do not feel sick enough to realize the need of entering a hospital, but should they not be urged to do so and special inducements offered, if necessary? Does extra cost count more than the graduation of men imperfectly instructed on so essential a point?

Tuberculosis is one of the most difficult of all diseases to diagnose in its incipiency. It presents varying symptoms of onset which are by no means closely associated with relative variations in the virulence of the disease. The diagnosis can not often be made at the first examination. One must study closely the past and present history of the patient, his environment, his symptoms, and the physical signs that are present, watching him carefully, from week to week, and frequently be forced in the end to rely on tuberculin in order to confirm what otherwise he could only suspect.

As with other diseases, every effort should be made to recognize tuberculosis in its onset. Yet how many students on graduation know it in this stage? Ask the recent graduates of any of our medical schools how many cases of incipient tuberculosis they have had the opportunity of studying. By far the greater number will reply, "None at all."

Dr. Barnes, in a striking paper on "The Mistakes in Diagnosis of Pulmonary Tuberculosis," gave in tabulated form the errors in diagnosis with which the patients coming under his charge at the Rhode Island Sanatorium had had to contend, and the loss of time in

the beginning of proper treatment which had resulted. Of 165 patients reported on by him 76 had been handicapped by incorrect diagnoses, the resulting delay being two to six months in 41 cases; six to twelve months in 15 cases and over twelve months in 20 cases. One can not read Dr. Barnes' paper without asking why the medical profession lays itself open to such an indictment. It is my belief that these errors are due in large measure to the fact that the students in the medical schools never have a fair opportunity of studying tuberculosis in its incipiency.

Let us consider one or two of the most general sources of error in diagnosis. It is all too common to meet with patients who have been told confidently that they have not tuberculosis, because a single examination of the sputum failed to reveal the presence of bacilli. It is well known to every man engaged in tuberculosis work and has been repeated sufficiently often in medical literature to be widely known outside, that it is often only after repeated daily examinations that the bacilli are found, and that in cases where every known means of examination fails to bring them to light the guinea-pig test will do so.

Very recently a case came to my knowledge where an instructor in one of our leading schools ridiculed a student for making daily sputum examinations on a case in which no signs could be found in the lungs, and when tubercle bacilli were found on the sixth day of successive examination refused to believe the case one of tuberculosis until the bacilli were again demonstrated. What man who had been made to follow the results of such sputum analyses in his student days would confidently assure a patient, on the strength of one negative examination, that he or she did not have tuberculosis? With the boards of health providing free examination of sputum there is no reason why repeated examinations are not possible in suspected cases.

Another common error, as evidenced in the case just alluded to, is that of telling the patient that he has no tuberculosis because the examiner can find no signs in the lungs. Not only is it true that the really incipient case usually presents no recognizable signs in the lungs, but, when the lesion is deep-seated, there may even be extensive cavitation and yet nothing amiss be revealed to the most experienced diagnostician. Hemorrhage usually signifies the rupture of a blood vessel in a cavity, large or small, where the vessel wall has been deprived of its customary support. How many of us can locate, by physical examination or otherwise, the cavity in which the rupture occurred?

If the medical student had seen the diagnosis of tuberculosis made and confirmed in cases where his teachers could discover no physical signs would he not in after life be less apt to deny the existence of a lesion merely because he could not locate it?

If he had been taught the main principles of the diagnosis of this disease he would not be apt to fall into either of the above errors. Nor would he rely on his morning office hour for his temperature record of the case, ascribe persistent localized lesions to "bronchitis," allude to pleurisy as "only pleurisy," comfort the patient with the assurance that the hemorrhage came from the throat, or insist on having all the well known symptoms of the disease along with the signs in the lungs before he felt sufficiently confident to make a diagnosis.

There is far less objection to the reception of incipient tuberculosis by a general hospital than that of the patient with advanced disease. These patients are less expensive to care for, their physical condition does not make them objectionable to the attendants, and they can be benefited decidedly by treatment there. Many cases could be arrested at the onset of the disease in patients who could not afford to go out of town for treatment, and who would not have realized the necessity of going even if they could have afforded it.

The cost of special facilities should not be allowed to count for more than the value of adequate instruction of the students. If the medical schools would provide for the care of a sufficient number of cases of incipient tuberculosis with which to thoroughly ground their students in its practical diagnosis such a record of error as shown by Dr. Barnes would be impossible.

Special Article

TRAVEL NOTES FROM SOUTH AMERICA.

THE LATE
NICHOLAS SENN, M.D.
CHICAGO.

(*Continued from page 277.*)

XII. MEDICAL PERU.

THE MEDICAL PROFESSION OF AREQUIPA.

Arequipa has eighteen physicians, a number apparently too large for a city of 45,000 inhabitants, of whom more than one-half are Indians who never expect to pay for medical services. Visits and office consultations on an average do not bring more than $1, and $10,000 a year is considered a very large income, to be attained only by a very few. Arequipa has a medical society of which Dr. Hunter is honorary president, and which meets weekly. All the local physicians, including an advertising homeopath, are members. Most of the physicians are graduates of the Lima Medical School, but quite a number of them have taken postgraduate courses in Europe, and in that way many of the new discoveries and much of the advancement in medicine have been transplanted to the virgin soil of Peru. Some of the physicians read the European medical journals, and all of them are subscribers to the two medical journals published in Lima, the *Revista Médica* and the *Chronica Médica*. The business and social relations between the Arequipa physicians seem to be of a better grade than in most of the Peruvian cities.

SAN JUAN DE DIOS HOSPITAL.

This is the only general hospital in the city. It is a very ancient building made up of one-story mud and cement pavilions, with many intervening courts, and from its dilapidated appearance and internal arrangements, must have been a convent during the Spanish rule. The inner arched galleries, high-arched wards and rooms, and the few, small windows, all show that the immense building was originally intended for the seclusion of nuns or monks. The furniture of the hospital is of the plainest kind and the pharmacy is supplied with all kinds of bottles which were not intended for a drug store, and immense old-fashioned jars, strong reminders of drug stores of a century ago. The floors of the wards, made of large tiles, were clean, and the plain beds were in good order. The hospital has 400 beds and is managed by eight Sisters of Charity of St. Vincent de Paul. The nursing, as a matter of course, is very poor, as most of it must be done by ignorant male and female helpers. In the center of the building two long wards cross each other at right angles, so that from the center each of the 200 patients can be seen. Provision is made in small wards for a few private patients, who pay $1 to $1.50 a day. The hospital has no resident physicians nor internes, and the members of the attending staff are obliged to bring their own assistants and instruments. I believe there is no hospital in the world managed more economically than this one, as the

average daily expense of each patient amounts only to 11½ centavos (2¾ cents) a day. Patients who can work are obliged to do so, and many things, such as mattresses, pillows, clothing, etc., are made in the institution. Medicines are dispensed in empty beer or wine bottles, with a label fastened to the neck, on which the directions are written. The day I visited the hospital five patients had died, and the sixth one must have followed the others in less than an hour, as he was then dying from cancer of the stomach. The worst looking room I have ever seen, in which operations are performed, I was shown here by the sister in charge. When I intimated that I would like to see the operating room, I noticed that she became uneasy, but when she reached it she flung open the large old door from the arched gallery and revealed the cellar-like large room with no windows or openings for the admission of light with the exception of the doorway. All this dark room contained was a naked marble table in the middle. Through an open door communicating with another similar dark room I saw the flickering light of a number of candles arranged around a corpse resting on a rude table, plentifully supplied with crosses. The corpse was one of the harvest of death for that day, as before we left that part of the building an Indian woman was screeching and swinging her arms, looking for her dead husband, who was then laid out in a room adjoining the operating room. This hospital is not entirely devoted to medical and surgical cases requiring hospital care. In one part I found insane people, and in many of the courts were lingering men and women whose only disease was the inevitable one which awaits us all should we live long enough —old age. I found in one of the private wards, a dark, close room, probably a former cell, a German engineer who had occupied this chamber for the last five months. Thirteen months ago, when employed in a mine in the interior of the country, ten days' travel on muleback from Arequipa, he had fractured the left femur at about its middle third. Under the most primitive treatment the fracture appeared to heal in the usual way, and then, when the healing process was arrested, he was obliged to make the journey to Arequipa on muleback. On the whole long, painful journey he had nothing to eat except one of the fruits of the country, the cherimoyer. His sufferings were so great that he attempted to end them by committing suicide, but his revolver missed fire, and he finally reached the hospital in an exhausted condition, from which he has not yet fully recovered, as he is emaciated and anemic. The excellent Buck extension dressing is the work of his own mechanical genius, and I hope will succeed in effecting a satisfactory healing of the fracture even at this late date.

The hospital is too poor to issue a printed annual report, but in one of the daily papers I found the last monthly report. During the month there were 754 new admissions, and at the end 341 patients remained in the hospital. There were 341 discharged cured, and 71 deaths occurred. The mortality list included the following: Pulmonary tuberculosis, 27; dysentery, 7; pneumonia, 5; old age, 4; typhoid fever, 3; Bright's disease, 2; epilepsy, 2; delivery, 1; meningocephalitis, 1; gangrene, 1; organic heart disease, 1; cerebral hemorrhage, 1; angina, 1; cancer of stomach, 2; cirrhosis of liver, 1; phlegmon of neck, 1; cancer of uterus, 1; pleurisy, 1; arteriosclerosis, 1; and typhoid pneumonia, 1. From the mortality statistics it will be seen that the causes of death in this part of Peru are about the same as in any city of the United States.

It is a source of satisfaction to know that there is a project on foot to build a new municipal hospital for Arequipa, which, when completed, will fill a pressing need, as the one which I have described has been for a long time, notwithstanding all its faults, a blessing to the community, but has become entirely superannuated.

MEDICAL CALLAO.

Callao has one large general hospital, the Guadalupe, built forty years ago, which can care for 300 patients. It is in charge of five Sisters of Charity of St. Vincent de Paul. It is built in the usual one-story pavilion style, with intervening courts and connecting galleries. It is constructed of adobe and cement, with wooden floors. Two large wards are set aside for the exclusive use of sailors, and it is in these wards that the linguistic accomplishments of attendants and physicians are sorely tried. Here we see the fair Scandinavians and North Germans side by side with negroes from various tropical countries, South American Indians, swarthy Italians, Spaniards and East Indians, ruddy Englishmen and heavily-bearded Russians. The hospital has an excellent location and some recent improvements like the new operating room and the fairly equipped laboratory show an awakening to the necessity of modern methods, a new ray of light in the medical and surgical practice of this institution. The two internes who are now on duty are members of the graduating class of the Lima Medical School, Mr. José S. Madalengvitia and Mr. Lizardo C. Villavicencenco. Dr. William M. Wightman, P. H. and M.-H. Service, showed me through the hospital, and for this as well as other courtesies, has placed me under many obligations. In this hospital I had an opportunity to examine the three cases of Verruga peruana, a description of which has already appeared on page 273.

LIMA THE OLDEST MEDICAL CENTER ON THE AMERICAN CONTINENT.

It is not generally known that Lima is the oldest medical center on the American continent, but nevertheless this is the case. The Lima University (Universitad Mayor de San Marcos) was the first institution of its kind in America. The origin of this university is to be found in the royal decree issued May 12, 1551, wherein the King of Spain, Don Carlos I, granted 350 gold dollars to the priors of the Dominican order, for the purpose of the establishment in Lima of an "Estudio General," conferring on it the same privileges and exemptions as those enjoyed by the celebrated University of Salamanca, it being required that its lecture halls be installed in the principal Dominican monastery. Later on, in 1572, at a meeting of the principal members thereof, Don Gaspar Meñeres, who bore the title in medicine as also that of Master of Arts, was selected from the secular brothers, and made rector of the institution. For this reason he figures on the chronologic list as the first of the rectors of the Lima University. The incipient university took its name on Dec. 31, 1574, from St. Mark, and this name it still bears. The name was chosen by lot from the names of several saints, a very singular procedure indeed for naming an institution, and understood solely in those medieval times when religious fanaticism pervaded every detail of thought and action.

From 1574 onward the University of St. Mark had a life of its own, and, two years later, in 1576, was on a footing to be able better to define its views of establishing in due form the higher education to be given in the institution. A plan of studies satisfactory for that period was organized, and the following classes were held: Two of grammar; one of native language; three of theology; two of canonical law, and two of medicine.

The graduating exercises at this period were complicated and elaborate. The ceremony was preceded by the celebration of the Mass of the Holy Ghost, after which the exercises began by the examination of the candidate during two consecutive days. If he was approved, he was solemnly led to the Chapel of the Virgin in the principal church or in the university, accompanied by the students, collegians and doctors, in order that he might there make the customary profession of faith, "pledging himself, on oath before the rector, to defend the mystery of the Immaculate Conception and to detest the execrable doctrine of tyrannicide and regicide." After this, he received the degree of doctor from the pontifical and royal authority, which was personified by the master of the school. The sponsor then terminated the ceremony by decking the successful candidate with the respective insignia. During the early history of the university the graduating expenses reached the fabulous sum of $10,000, which the candidate had to pay. In 1743 this was reduced to $2.000; in 1870 it was fixed at $800, and at present the candidate pays $50 for the doctorate degree. Attendance at the university is free, but those alone are permitted to present themselves for examination who are matriculated. The present attendance in all the

departments is about 500, of whom 5 are women. The examinations take place from December 1 to December 22, are only for those who have studied the entire year, and are oral in all the faculties except that of letters, in which a written examination is added.

The university is a venerable looking building, two stories high, with courts and connecting arched inside galleries from which the different lecture rooms are entered. The faculty room is a magnificent hall with a richly carved wooden ceiling of great age. The walls are hung with large portraits in oil, of the deceased deans and distinguished members of the faculty. As all the lectures of the different departments, with the exception of the medical, are given here, it is an easy matter to find some one or usually several teaching at the same time. Students flit about noiselessly with note books under their arms, going to or coming from lectures. The lectures last one hour. I looked into one of the lecture rooms of the law department and counted 15 students who were paying strict attention to the lecturer and taking extensive notes. The university church is one of the oldest in the city. It contains massive wood carvings, among them the main altar and the pulpit, the latter consisting of two pieces of wood. The floor consists of large flat stones and tiles. The church was founded by Bishop Antonio Correos, whose remains are interred in front of the main altar.

The libraries of the university contain many rare manuscripts relating to the early history of the institutions. The courts are paved with pebbles, the lower galleries with asphalt.

SCHOOL OF MEDICINE.

The Lima Medical School has been, from its very beginning, an organic part of the university. The medical faculty, like all the other faculties, manages its own affairs, and the school has its own buildings, which are situated near the Botanical Garden on a large plot of ground. The anatomy building is separate. It is a large one-story building devoted exclusively to the teaching of anatomy. The bodies are kept in an excellent state of preservation, and the dissections I saw showed care and patience on the part of both student and teacher. The police surgeons make all their postmortem examinations in a separate room in the anatomy building in presence of the students—a most excellent plan, as this practical kind of instruction gives the students an opportunity to become familiar with the technic of postmortem examinations and legal medicine.

The new medical college was completed in 1903, and is one of the finest buildings of its kind I have ever seen. It is two stories high, built of brick and cement. The arched inner galleries lead to the laboratories and lecture rooms, all of which face the large square, open central court or patio. This court will soon be converted into a charming flower garden, the pride of the South American. The architecture is Greek in style, the six columns at the entrance imparting an air of dignity to the building. The tile floors and heavy stone stairs give the interior of the building an appearance of cleanliness and durability. The number of students in attendance at the present time is about 200.

The Faculty of Medicine grants the title of "Physician and Surgeon," and its studies are distributed over a period of six years, during which the following courses are followed: Descriptive anatomy; medical physics; public, private and international hygiene; medical and analytical chemistry; natural and medical history; general anatomy and microscopic technic; chemical and Galenical pharmacy; general and human physiology; general pathology and clinics; pathologic anatomy and bacteriology; therapeutics and materia medica; general surgery; local surgery; medical nosography; ophthalmology and eye clinics; topographical anatomy and operative medicine; gynecology and gynecologic clinics; pediatrics and pediatric clinics; obstetrics and obstetric clinics; legal medicine and toxicology; chirurgical clinics, men's hospital; chirurgical clinics, woman's hospital; medical clinics, men's hospital, and medical clinics, woman's hospital.

This same medical faculty educates and graduates apothecaries, dentists and obstetricians. The apothecaries in order to qualify for graduation must go through the following course of studies, covering a period of three years: Medical physics; analytical chemistry; medical and natural history; microscopic technic; chemical and Galenical pharmacy, and materia medica. They must also have had office and laboratory practice.

The students of dentistry likewise go through a three-year course of study as follows: Anatomy; physiologic anatomy and physiology, with especial reference to the mouth; chemistry as applied to the dentist's art; general ideas of the pathology and therapeutics of the mouth; special operative measures and dental prothesis. They also must have had office practice, and have attended the laboratory and the amphitheater or practice room.

Obstetricians must study in the fourth year of their course the following subjects: Anatomy of the pelvis; special physiology; embryology; mechanism of labor; obstetric operations; hygiene of mothers and of the newly born, and obstetric clinics.

In the teaching of medicine much weight is placed on the value of bedside instruction and the attendance at operations. Candidates for the doctorate degree must write a thesis, which, if accepted, is printed, and must be defended by the author in public.

(To be concluded.)

Clinical Notes

THE CUTANEOUS TUBERCULIN REACTION.*

LOUIS M. WARFIELD, M.D.
ST. LOUIS.

Last summer von Pirquet reported that vaccination of tuberculous individuals with old tuberculin gave rise to a typical local reaction. Since then several observers have reported on this reaction, some favorably, others more or less unfavorably.

My series of cases includes infants from 3 months to 4 years of age (55 cases), children at an orphans' home from 5 to 14 years of age (51), persons seen in dispensary and private practice, youngest 9 years, oldest 51 years (32), and twelve cases of advanced lung tuberculosis in men.

For the vaccination, use was made of Koch's old tuberculin, diluted with one-half of 1 per cent. carbolic acid to 25 per cent. The solution kept for a long time, and the carbolic acid did not cause any skin reaction when tried alone. Instead of von Pirquet's special chisel-like vaccination lance, one was made by filing off the point of a blood lance. The following procedure was adopted as giving the best and most uniform results: The skin of the upper arm, in a place free from hairs, is washed with alcohol and allowed to dry. On two places, about three inches apart, is dropped one drop of the solution from a sterilized hypodermic syringe. The skin between the drops is then scarified with the lance by turning it to and fro, and then the scarification is done through the drops. After one or two minutes, the tuberculin is mopped up. No dressing is necessary. If the faintest reaction occurs, it is easily seen by comparing it with the central control spot.

Of the 55 infants only one, an infant of 7 months, reacted. This baby was apparently healthy. It happened that a few facts were known about its mother. She had advanced tuberculosis when the baby was born, and died one month later. The baby was with her all the time. Another child, one that did not react, was born of a tuberculous mother, but was immediately

* Abstract of a paper read before the Section of Internal Medicine of the St. Louis Medical Society, Jan. 11, 1908.

taken from her. One or two other babies were said to have had tuberculous mothers, but there was no definite history obtainable.

Of the 51 children, boys and girls, at the orphans' home, the reaction was positive in 15 cases and negative in 36 cases. There were several groups of brothers and sisters. Some of these groups proved to be interesting. For example, three in one family, 6, 8 and 10 years old, respectively, the youngest and oldest reacted slightly. History not sure, but it is believed that the mother died of tuberculosis. Of two children, 8 and 12 years old, the older reacted slightly; history not known. Of two sisters, 8 and 9 years, the older reacted slightly; history not known. A brother and sister, aged 12 and 15, reacted, the sister more markedly than the brother; no history. Three, two boys and a girl, 7, 9 and 12 years, all reacted. It is known that the mother died of tuberculosis two years ago. The children were then placed in the orphanage. Several groups of brothers and sisters did not react. All these children were unusually healthy and well nourished.

Of the twelve patients with advanced tuberculosis, eleven reacted. One was cachectic, with also a probable carcinoma.

The remaining 32 cases are very interesting. They show that not all adults react to the test. The oldest patient, a woman of 51 years, was quite negative, and the youngest, 9 years old, was also negative. The reaction was positive in 16 cases; negative in 16 cases. One of the most typical reactions occurred in a man, 26 years old, well-nourished and perfectly healthy. He had never had any serious illness. No tuberculosis in his family. He was injected with 1 mg. of Koch's old tuberculin. There was induration and considerable soreness at the site of injection, but no constitutional symptoms were noted. Three days later he was given 5 mg. of O. T. There was marked pain and swelling, with tenderness at the site of injection. Twenty-two hours afterward there was intense headache. There followed within a few hours malaise, rapid pulse and a rise in temperature of 1.2 degrees. One case, male, aged 31, did not react on two separate occasions. There was no local or constitutional reaction to 5 mg. O. T. or to 10 mg. O. T.

A woman, aged 32, not only did not react to the skin test, but also to the ophthalmic test. Tuberculosis was suspected in her case. Three and later 5 milligrams O. T. caused no local or constitutional reaction and no change in the lung signs.

Six of the positive cases were well persons. Two brothers, 15 and 18 years old, were undersized, pale, with long narrow thoraxes and stooping shoulders. Both parents died of tuberculosis nine and two years ago. Three young men, physicians, healthy, with good family history, reacted strongly. The sixth was a very tall, thin, narrow-chested boy of 19 years, family history good. He was always tired, could not concentrate his mind and was subject to fainting spells.

Eight positive cases included suspected early tuberculosis, diagnosed early tuberculosis, and one healed case.

I am impressed with the negative value of the test. Some apparently perfectly healthy persons reacted. The test is not a sign of active tuberculosis at any rate. von Pirquet found that if there is only a caseated gland or a calcified nodule at an apex, that the reaction followed vaccination. Cachectic cases, cases of miliary tuberculosis and lethal cases of tuberculous meningitis are said not to react to the test.

The following conclusions seem justified:

1. The cutaneous tuberculin reaction of von Pirquet is a perfectly harmless procedure.
2. All adults do not react to the vaccination.
3. It is of value in the so-called pretuberculous stage.
4. No reaction precludes tuberculosis in an active form so far as we can be sure of the results of any one test.
5. A positive reaction does not always mean active tuberculosis. It may mean a healed lesion somewhere in the body, but it calls attention to the possibility of later tuberculosis. It also draws attention to the probable tuberculous nature of the case, and a more careful examination of the patient will sometimes reveal the previously overlooked lesion.

METATARSALGIA.

FERDINAND SCHMITTER, M.D.
First Lieutenant and Assistant Surgeon, U. S. Army.
STATIONED AT FORT EGBERT, ALASKA.

In looking over the literature I can find but one operation recommended for the relief of metatarsalgia—the excision of the head of the metatarsal as advised by Morton. Various palliative measures have been used with some success.

Several theories have been offered to explain the etiology. Whitman's explanation of lateral pressure by tight shoes on the depressed transverse arch is no doubt the correct one. In the two cases reported the depression of the arch was caused by pressure of the shoe against the second toe joint, forcing the first phalanx downward against the metatarsal bone. The factors which may tend to hold the first phalanx in this undesirable position are: 1, Displacement of the toe upward by hallux valgus; 2, hammer toe; 3, contracted tendons; 4, jamming backward of the toe by a short shoe. Hence the shoe which causes metatarsalgia is the one which squeezes laterally and at the same time presses downward on the second toe joint. With the increasing use of the modern rational-shaped shoe metatarsalgia, along with hallux valgus, ought in the next generation to become an orthopedic anachronism.

The two following cases illustrate my observations:

CASE 1.—A heavily built woman, aged 43, complained of pain in the second right metatarsal.

History.—The patient had an attack of rheumatism four years ago. The feet were swollen and when this swelling went down the second and third toes were left displaced at their bases.

Physical Examination.—There was marked hallux valgus, also a slight degree of flatfoot. The second toe was displaced upward and almost lay on the outwardly displaced great toe. When the shoe was on, the second joint of this toe caught the brunt of the dorsal pressure of shoe in this region. This pressure was transmitted through the first phalanx to the metatarsal, causing depression of the arch. On the sole of the foot was a callus where the metatarsal pressed.

Operation.—Amputation of second toe at first joint. At operation it was noted that the first phalanx articulated, not with the head of the metatarsal, but with its dorsal surface.

Result.—Metatarsal pain never reappeared after operation (seven months ago). The patient was so pleased that she returned for hallux valgus operation which she had previously refused.

CASE 2.—Man, aged 26, tall, slender and athletic, complained of pain at head of fourth metatarsal, left foot.

History.—Pain was first observed suddenly while the patient was playing tennis two years ago. It intermittently annoyed

him ever since, especially when he would step on the outer side of the foot. It was relieved by taking off shoe and rubbing foot.

Physical Examination.—The foot was long and slender. Second, third and fourth toes were "hammer toes" of mild degree. The second joint of the fourth toe was most prominent and caught the brunt of dorsal pressure in this region. The pressure was transmitted through the first phalanx to the head of the metatarsal. The pain could be reproduced at will by squeezing the foot and pressing the first phalanx downward on the metatarsal.

Operation.—Oct. 18, 1907. Amputation of toe at first joint.

Result.—There have been no more attacks since the operation. Two months after, patient could "hike" several miles over rough ground without any symptoms which before operation were very severe on such occasions.

CONCLUSIONS.

1. In some cases, if not all, the depression of the transverse arch is caused by the shoe pressing the first phalanx downward against the head of the metatarsal.
2. The condition can be relieved entirely in some cases, if not all, by amputation at the first joint.

CARDIAC ASTHMA AND SCLEROSIS OF THE RIGHT CORONARY ARTERY.

E. O. JELLINEK, M.D., AND C. M. COOPER, M.D.
SAN FRANCISCO.

We desire to advance a suggestion, for the partial corroboration of which we have long waited for postmortem material, viz.: that cardiac asthma is a right-sided angina, and that the common postmortem lesion will be found to be sclerosis or its equivalent of the right coronary artery. Our reasons for this suggestion we will bring forward later, but now simply wish to record the postmortem findings by Keith of two cases of Mackenzie's, to whom one of us lately communicated the idea, and whom we desire to thank for his courtesy.

CASE 1.—During life: Angina pectoris plus cardiac asthma. Postmortem: Sclerosis of both coronary arteries.

CASE 2.—During life: Cardiac asthma, no angina pectoris. Postmortem: Marked sclerosis of the right coronary artery, left artery normal.

German Hospital.

A PIECE OF PAPER IN THE MALE BLADDER.

ERNEST G. MARK, M.D.
KANSAS CITY, MO.

The following case is of interest from the fact that it adds to the already long list of foreign bodies found in the male bladder a unique specimen:

Patient.—Mr. F. M., contractor, aged 59 years, married, was referred to me by Dr. H. D. Hamilton, of this city, and was first seen by me on Jan. 5, 1908.

History.—Two weeks previously, on Dec. 22, 1907, he had, while intoxicated, rolled up a long slip of paper which he introduced deeply into the urethra. He could give no explanation for this maneuver other than his intoxicated condition. About a week following he called on Dr. Hamilton, suffering from a fairly severe cystitis. He then stated that he had passed bits of paper during urination. He was placed on treatment, but without relief from his symptoms. Dr. Hamilton, suspecting the presence of more paper in the bladder, referred him to me.

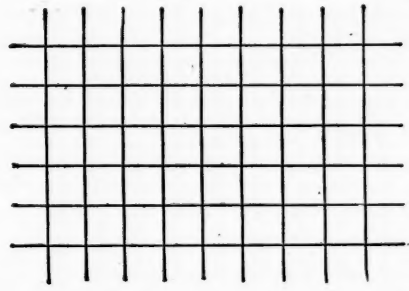
Treatment.—He was sent to the South Side Hospital, and on January 5 I examined him with the cystoscope under general anesthesia, for the reason that, in the event of the cystoscope proving the diagnosis, removal of the foreign body was, of course, essential. Examination revealed the paper in a fairly deep bas fond, rolled on itself and partially incrusted with urinary salts. The patient was put in an exaggerated Trendelenburg position and my air-inflation urethroscope inserted, using a No. 28, French, tube 15 centimeters in length. Forced air inflation gave a good view of the bladder and piece of paper, and an attempt was made to tear the paper to pieces by means of a pair of alligator forceps, as the piece, in its entirety, was too large to be removed through the urethroscope. Three small pieces were removed in this manner, but the paper, contrary to expectations, proved hard to tear, and, as the patient was taking the anesthetic badly, further procedure was deferred. The following day suprapubic cystotomy was done, Dr. Hamilton assisting, and a large piece of paper was removed. The patient made an uneventful recovery.

AN AID TO INSPECTION.

K. HEBERDEN BEALL, M.D.
FORT WORTH, TEXAS.

In looking for pulsations which were not well defined and in the study of the outlines of organs and tumors I have had much help from the following simple maneuver:

Over the area under inspection there is drawn with a skin pencil a square plaid figure, the squares of which are from 1.5 to 2.5 cm. in diameter and from 12 to 50 in number, according to the size of the area being studied. Any slight movement of the skin at any point



in such a marked area causes a change in the direction of some of the lines and a distortion of the figure, and so renders visible movements of the internal organs which are not to be detected otherwise.

In one case, a distended gall bladder, which gave no sign of its presence, was plainly visible at a distance of several feet when the plaid figure was drawn on the skin over it. To be convinced of the value of the procedure, one has only to experiment with a cardiac impulse which is not, or is just barely, visible.

Efficacy of Calcium Chlorid in Arresting Albuminuria.—L. Rénon has found calcium chlorid surprisingly efficacious in arresting albuminuria of various origins. It cured a number of patients after the complete failure of dietetic measures and prolonged repose. In half the cases treated the albuminuria showed great improvement and in a fourth of the cases it vanished entirely. In another fourth no effect was apparent, or the albuminuria became aggravated, which occurred in a few instances He gave 0.1 gm. (1.5 grains) for five or six days, and gradually increased the dose if necessary to a maximum of 0.5 gm. (7.5 grains), keeping up the treatment for a month if the albuminuria persisted. In his communication on the subject presented to the Paris Société de Thérapeutique, November 19, he said that the calcium chlorid proved thus effectual in his experience without any supplementary measures or repose.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price.....Five dollars per annum in advance

[*For other information see second page following reading matter.*]

SATURDAY, FEBRUARY 29, 1908.

THE EARLY ACCOUNTS OF EPIDEMIC POLIOMYELITIS.

The early accounts which tend to establish any particular disease as a definite clinical entity naturally have a peculiar interest to all who find pleasure in tracing the development of medical knowledge. The recent epidemics of poliomyelitis, especially in Norway, and during the past few months in various parts of this country also, have directed attention to the historical side of this disease, which no doubt occurred in the past in about the same way as it is manifesting itself in these days. At first, Bergenholtz, in Finland, was thought to have been the first to describe an epidemic of poliomyelitis, at least in Europe, his report covering 18 cases. Then it was found[1] that the disease had been clearly described in 1868 by A. C. Bull, a country physician in Norway, under the title of "Meningitis Spinalis Acuta."

Bull reported to the health authorities fourteen cases of this disease, with five deaths. His description is minute and clear; he shows himself a keen clinical observer, as may be seen from the following quotations: "The disease commenced with fever, which in most cases, however, was quite light. Then came pricking pains of a fleeting nature here and there in the different joints and limbs as well as in the back, and in some cases there was also more or less widespread tenderness on pressure along the spinal column, at times only in the cervical region, at times only in the lower part of the dorsal region. The next phenomenon was paresis or in some cases complete paralysis either of one or as a rule of several limbs, appearing from three to four or five days after the outbreak of the disease. In one case, both lower extremities became paralyzed; as a rule, one lower and one upper extremity, either on the same side or on opposite sides, suffered; occasionally the paresis became actually stationary in only one limb, a preceding brief and insignificant paresis of some other limb being, as a rule, demonstrable. Sometimes there was found paresis of the muscles of the back of the neck on one or both sides. There was no sign whatsoever of a simultaneous affection of the cerebrum; a little headache, dizziness, and rarely vomiting were, it is true, observed in a few cases, but were attributable to the fever. Remarkably enough, there was not in a single case convulsions nor was there any anesthesia. . . . When the disease had lasted four or five days a change took place, either the paresis spread, eventually reaching the respiratory center with fatal result, consciousness remaining until the very last . . . or the febrile phenomena disappeared quite rapidly, as did the tenderness in the back as well as the pains, recovery being prompt except as to the loss of use or diminution in use of one or more limbs. In most cases, the paralysis became less and less pronounced and reduced to paresis; while the paralysis at first extended to all the muscles of an extremity it later became limited to only individual muscles so that contractures arose through the predominance of the healthy muscles."

Twelve of Bull's cases occurred in children between 4 and 10 years of age, one in a girl of 15 and one in a man of 20. He also mentions two so-called abortive cases. Bull's anatomic localization of the morbid process in the spinal meninges is, of course, not at all strange when we consider the state of the general knowledge of the anatomy of the nervous system at that time (1868). Nor would it be strange if the same disease was found to have been described by others under other more or less misleading titles. Indeed, this seems clearly to have been done by an American physician so long ago as 1841, namely, by George Colmer in Louisiana. Colmer's statement[2] is very brief and runs as follows:

"While on a visit to the parish of West Feliciana, La., in the fall of 1841, my attention was called to a child about a year old, then slowly recovering from an attack of hemiplegia. The parents (who were people of intelligence and unquestionable veracity) told me that eight or ten other cases of either hemiplegia or paraplegia had occurred during the preceding three or four months within a few miles of their residence, all of which had either completely recovered or were decidedly improving. The little sufferers were invariably under 2 years of age, and the cause seemed to be the same in all—namely, teething."

Colmer's and Bull's observations appear to be the earliest now known to foreshadow clearly the clinical entity of epidemic poliomyelitis. It would be interesting to trace the further growth of our knowledge of this disease to the present time when the actual cause of the infection is the problem that calls most urgently for immediate solution. That, however, lies outside the scope of this statement.

1. Leegaard: Norsk Mag. f. Laegevidenskaben, 1907, lxviii, 1241.

2. Paralysis in Teething Children, Am. Jour. Med. Sci., 1843, v, 248.

A PHYSICIAN POET.

A movement is on foot to obtain the permission of the Dean of Westminster, on whom devolves the privilege of conferring such permissions, to allow a memorial to be placed in Westminster Abbey in honor of the Canadian poet, William Henry Drummond. Few readers of current literature in this country are ignorant of the name and have not been delighted with some of

the work of this poet of "The Habitant." Few even of those who know him best, however, realize that for many years he was a practicing physician in Montreal and that he took his professional work very seriously, and was, indeed, in many ways the model of a physician at his best. His picture of the devotion and self-sacrifice of the doctor "on the parish of St. Matthieu" is indeed claimed by his friends to have contained more of the traits of his own character than of any one else with whom he or they were acquainted. The picture is quite as beautiful in its presentation of how a doctor may care for others without too many thoughts for himself as Ian Maclaren's "Weelum Maclure." Literary men have not, as a rule, written over-favorably of doctors, and these two writers did much to redeem the profession from undeserved reproaches and to show that it still cherishes the highest ideals.

It seems only proper that physicians generally should know something about a great member of the profession like this and should lead others to appreciate the work that he has done. Drummond did not write for name or fame, much less for money. As a writer in the February number of *Putnam's Magazine* says: "Many of his poems were well-known in the cities and camps of the Dominion of Canada, having crept into newspapers and been circulated from hand to hand long before their author was persuaded by his wife, a critic much more just than he, to turn out the contents of his desk and allow the first collection to be given to the world in an authorized form." His book had an immediate success. "The Habitant" was different from anything heretofore produced on this continent. It revealed to the English-speaking people of North America an intensely interesting race—the people of New France—described with sympathy by a man who knew them and had the magical gift of making them live. As a proof of how much more influential in serious things ideas may be than deeds, it may be said without exaggeration that Dr. Drummond's book did more to make the two great divisions of the Canadian people, the French of lower Canada and the English of upper Canada, sympathetic toward one another than all their community of government under English rule and supposed identity of political interests for several centuries.

This thoroughly sympathetic poet, who knew his human beings, humble though they were, and unschooled, and who depicted them so vividly, is a striking example of what may be accomplished by the patient observer who sees the best in human nature and reflects it in the mirror of a soul unspoiled by pessimism. Undoubtedly, his profession did much to train Dr. Drummond in his beautifully sympathetic attitude, and his life, therefore, becomes an incentive to others to look up, not down, within, not without, and to realize that this may not be the best of all possible worlds, but that there are so many compensations for the bad in it, that it is not more than a half bad place after all.

THE SPECIFIC TREATMENT OF HYDROPHOBIA

Since Pasteur in 1885 gave to the world his method of treating rabies by subcutaneous injection of fixed virus prepared from the spinal cord of inoculated rabbits by the process of drying, a number of other methods have been suggested and tested in a practical way. All, however, must be considered as modifications of the method of Pasteur and are based on the fundamental principles which he first discovered.

Chief among these modifications may be mentioned that of Högyes, who, instead of using the dried cord, begins with injections of a highly diluted virus and gradually increases the concentration until immunity is established. The Babes-Puscariu method is based on the fact pointed out first by Babes and later by Puscariu that the virulence of the cord is diminished by heat and the loss of virulence is proportional to the time of exposure. The same effect may be produced by heating at different temperatures for a given time (ten minutes).

Tizzoni and Centanni found that the virus may be reduced in intensity by exposure to gastric juice, and the application of this fact in the preparation of fixed virus has come to be known as the Italian method.

A third method is that of Ferran. Nitsch demonstrated on himself what had previously long been surmised, namely, that the human organism is not highly susceptible to fresh fixed virus. He injected 2 c.c. of an emulsion made from a piece of fresh cord, 5 millimeters long, removed from an animal of the eight hundred and fifty-eighth passage. This was of such virulence that 1/1,000 of this amount would kill a normal rabbit in seven days; yet in him it caused only a slight local reaction. Now the method of Ferran in Barcelona consists in the subcutaneous injection of fresh fixed virus of full strength. The results are satisfactory, the mortality in the first thousand cases treated being only two. The results also show the harmlessness of the fixed virus when injected into man.

The original Pasteur method of injecting at frequent intervals fixed virus weakened by desiccation and then gradually increasing the strength until the fresh virus is given is still, however, the one most used. The preparation of the virus and the necessity of using it fresh requires that the treatment by this method be carried on in properly equipped institutions, and on this account Pasteur institutes, as they are called, have been established in various parts of the world for this special purpose. The objections to this method are obvious. In the first place, considerable time may be lost in bringing a patient bitten by a rabid animal to such an institution from remote parts of the country. Time is important in all cases, and especially in injuries about the face and head. The expense of traveling long distances must be mentioned, too, as an element of special importance in the case of poor people. To meet these objections to the Pasteur method, as well as others such as

the danger of infection, abscess formation or septicemia, is a problem well worth study. Fermi[1] believes that he has met many of the objections, but to what extent has not been determined, since his method has not yet been tested on human beings. His results with animals, chiefly rats, appear promising. By adding 1 per cent. carbolic acid to fixed virus and using large quantities he obtains a satisfactory virus which preserves its efficiency for at least four months. Other antiseptics were tried, but none was found so satisfactory as carbolic acid.

If some such preparation as this proves effective and its potency does not deteriorate rapidly, it may be feasible to keep it on hand at central depots so that in cases of injury from rabid animals the treatment can be started at once and carried out under the direction of the home physician in the same way as we at present treat diphtheria with antitoxin.

THE LANCET LIBEL CASE.

Our British contemporary, the *Lancet,* recently lost a libel suit brought against it by the English agent for an American nostrum; the details have been given in our London letter.[1] That the *Lancet's* criticism of the nostrum should have contained a statement that was not capable of documentary proof is unfortunate. Yet we incline to the belief that out of this evil will come much good. The trial and its result have awakened the public and the medical profession in England to the widespread use of habit-forming nostrums, and a vigorous crusade is now being waged against this evil.

The trial brought to light two facts that are worthy of consideration. One was that no fewer than three physicians—not irregulars, but licensed practitioners—admitted on the witness stand that they either had used the nostrum themselves or had prescribed it for their patients. This indicates that the moral and financial support given "patent medicine" manufacturers by the thoughtless prescribing of nostrums is not confined to this side of the Atlantic. The other was the surprising ignorance of the judge on the subject of chronic cocainism. When the evil of allowing the indiscriminate sale of a remedy containing cocain was before the court, Judge Ridley made the following remarkable statement: "Surely it (the cocain habit) must be infrequent. I thought it was chiefly to be found among the Indians of South America." Another remark of the judge is worth noting as indicative of his attitude toward the defendants throughout the trial. Alluding to the nostrum vendor's practice of supplying his "specific" on trial for a fortnight, his lordship remarked that it seemed to be "a case of no cure, no pay—a thing you don't get from many doctors." When we bear in mind the enormous influence judicial comments have with British juries the verdict is not altogether a surprise.

In an editorial commenting on the result of the trial the *Lancet* states that "the verdict leaves us strictly unrepentant," and, while in the future "the expressions used must be those which can not be so easily challenged . . . our policy must remain unaltered." The unpleasant necessity may, therefore, again arise for the *Lancet* to justify its eminently proper attitude toward quacks and quackery. When this occurs it is to be hoped that the case will not be tried before a judge whose ignorance of drug addictions causes him to think that cocainism is "chiefly to be found among the Indians of South America."

In conclusion, we can not resist the suggestion that while the *Lancet* is investigating American nostrums as sold to the public direct, it might with propriety examine those offered to physicians, whose claims appear in its own advertising pages.

THE RESULTS OF ONE MEETING.

The widespread influence of a frank discussion of existing evils is shown by an editorial in the *New Orleans Picayune,* Sunday, February 2. Nearly a column of space on the editorial page is devoted to a report of a recent joint meeting held by the Chicago Medical Society and the Chicago druggists. After commenting on the war which is being waged on "patent medicines" and the harm resulting from the use of such preparations, the *Picayune* says: "There are many pharmacists who deplore the use by physicians of these ready-made compounds. . . . Many leading physicians are realizing the importance of such a reform and are uniting with the pharmacists in the effort to secure such a result." In such joint meetings the *Picayune* sees a possibility "of a real reform that will put all medication on its merits and redound to the proper protection of the people, both sick and well." That the Chicago meeting was productive of much good locally was recognized. That the influence of the meeting should have extended as far as New Orleans is gratifying. It is even more gratifying to have such newspapers as the *Picayune* recognize the importance of the "patent medicine" evil and the need of united efforts to correct it.

CANADIAN NATIONAL BUREAU OF HEALTH.

Possibly influenced by the suggestions afforded by the movement in this country for a national health bureau and the arguments advanced in favor of it, our Canadian neighbors are also taking up the subject. The medical members of the Dominion House of Commons have started an effort to impress on the government the advisability of federal supervision of health matters instead of leaving it, as heretofore, to be a purely provincial affair. They, like ourselves, can see the evils of ununited effort and with more reason it may be, since there is not the degree of general oversight and control that is to be found on this side of the line in our general pure food law and in the functions of the U. S. Public Health and Marine-Hospital Service. The problems to be met in Canada are not so numerous as those existing

1. Zeit. f. Hyg., 1907, lviii, p. 233.
1. THE JOURNAL A. M. A., Jan. 11, 1908, 133; Feb. 15, 1908, 543.

in this country with its greater climatic range, but there are enough to make their successful solution matters of national and not merely of local importance, and they are certain to be still larger in the future. The movement does not aim, it is understood, to interfere with the work of provincial boards in purely local matters, but to supplement and unify their work and to make practicable such needed measures as can not be secured in perfection by divided effort. We can cordially wish our Canadian brethren success; a scientific dominion health board cooperating with an organized department or bureau with similar powers on this side of the boundary should be a far more satisfactory arrangement for settling future problems than that now existing.

Medical News

ARKANSAS.

Hospital Opened.—The new hospital for colored people at Fort Smith was opened with formal ceremonies February 17.

Epidemic Diseases.—Whooping cough and measles are reported to be epidemic at De Witt.——On account of an epidemic of measles at Bearden, the public schools have been closed for two weeks.

Personal.—Dr. Pearl H. Tatum, Eureka Springs, has been appointed a member of the Eclectic State Medical Board.——Dr. Harry Payne, Hot Springs, has accepted the position of chief surgeon of the Stillwell railroad over the Andes, and will have his headquarters at La Paz, Bolivia.——Dr. Robert L. Caldwell, Pine Bluffs, has been placed in charge of the medical department of the Arkansas National Guard.

Arrested and Fined.—James S. Fulton, an unregistered practitioner of Hot Springs, who was charged with assaulting an officer, is said to have been sentenced to pay a fine of $50 and to be imprisoned for 70 days in the city jail.——Dr. George W. Fulton, son of the foregoing, was arrested January 25, charged with violating the act of Congress, by giving a prescription to a patient, instructing him to take baths on the reservation.

Society Meetings.—At the annual meeting of the Pulaski County Medical Society, held in Little Rock, the following officers were elected: President, Dr. John R. Dibrell; vice-president, Dr. Orange K. Judd; secretary, Dr. John G. Watkins; treasurer, Dr. Stradder U. King, all of Little Rock.——At the annual meeting of the Phillips County Medical Society, held in Helena, Dr. Montague Fink, Helena, was elected president; Dr. John W. Bean, Trenton, vice-president, and Dr. Clifford H. Trotter, Helena, censor.——The Sebastian County Medical Society, at its annual meeting, held in Fort Smith, elected Dr. Herbert Moulton, president; Dr. James G. Omelvena, vice-president; Dr. Charles S. Holt, secretary, and Dr. James A. Foltz, treasurer, all of Fort Smith. Dr. St. Cloud Cooper succeeded himself as censor.——The Benton County Medical Society held its annual meeting in Gentry and elected Dr. Joseph L. Clemmer, Springtown, president, and Dr. James H. Beard, Gentry, secretary-treasurer.

CALIFORNIA.

Progress in the Fight Against Plague.—The special correspondent of THE JOURNAL in San Francisco telegraphed February 25, that there had been no cases of human bubonic plague since his last report, and that the proportion of disease in the rats examined had decreased to 1.3. About 200 more men have been placed on the work of rat extermination, and are paid from the fund raised by subscription. This fund will aggregate about half a million dollars. During five days of last week, 10,345 rats were caught, or almost double the number caught in the previous week. Proceedings against the nuisances in Butchertown have been taken; many buildings in that section will be condemned and destroyed. The work is being actively supported by the citizens, and backed by the Bar Association.

Society Meetings.—At the annual meeting of the San Joaquin County Medical Society, held December 30, the following officers were elected: Dr. Edgar A. Arthur, president; Drs. J. Porterfield Hull and Mary C. Taylor, vice-presidents, and Dr. B. F. Walker, secretary-treasurer, all of Stockton.——The Redlands Medical Society at its meeting held recently, took over the San Bernardino County Medical Society, which had been moribund for two years, and then submitted its local name for that of the county organization and elected the following officers: President, Dr. D. C. Strong, Redlands, and secretary, Dr. Antoinette M. Bennett-Nash, San Bernardino.——At the annual meeting of the San Diego County Medical Society, held January 3, the following officers were elected: President, Dr. Fred R. Burnham; vice-president, Dr. Fred Baker, and secretary-treasurer, Dr. R. E. Austin, all of San Diego.——At a meeting of the Yolo County Medical Society, held in Woodland, January 14, Dr. Thomas W. Gallion, Davisville, was elected president; Dr. Hiram D. Lawhead, Woodland, vice-president, and Dr. Frances L. Newton, Woodland, secretary-treasurer.——At the annual meeting of the Butte County Medical Society, held in Chico recently, the following officers were elected: President, Dr. Lewis Q. Thompson, Gridley; vice-president, Dr. Charles L. Browning, Chico; secretary-treasurer, Dr. Ella F. Gatchell, Chico, and censor, Dr. Newton T. Enloe, West Branch.——The Santa Barbara County Medical Society, at its annual meeting, January 13, elected the following officers: President, Dr. William T. Barry, Santa Barbara; vice-president, Dr. William A. Rowell, Goleta; secretary-treasurer, Dr. David A. Conrad, Santa Barbara; vice-presidents at large, Drs. Lambert B. Coblenz, Santa Maria, and Reuben W. Hill, Carpenteria; and members of the house of delegates, Drs. William T. Barry and Rexwald Brown, Santa Barbara.——At the annual meeting of the Stanislaus County Medical Society, held in Modesto, January 16, the following officers were elected: Dr. W. J. Wilhite, president; Dr. Herbert C. Watts, vice-president; Dr. Benjamin F. Surrhyne, secretary and treasurer, and Dr. Herbert C. Watts, delegate to the state society, all of Modesto.——At the annual meeting of the Fresno County Medical Society Dr. Albert H. Taylor was elected president, and Dr. Thomas M. Hayden, treasurer, and Dr. L. R. Willson was re-elected secretary, all of Fresno.

ILLINOIS.

Chicago Personal.—Dr. and Mrs. E. Fletcher Ingals have returned from an extensive tour of Mexico.——Dr. Jacob Frank has had conferred on him the insignia of the Red Cross of Japan.

Must Not Spit.—Chicago has resumed enforcement of the antispitting ordinance. February 24, twenty-one men who had been arrested in the downtown districts for spitting on sidewalks and platforms, were found guilty and fined $1 and costs each.

Cocain Case.—One of the officers and two clerks of a prominent firm of wholesale druggists have been arrested on complaint of the State Board of Pharmacy, charged with selling cocain without a physician's certificate or failure to keep a register of the cocain sold. The cases were continued.

Gynecologists Mourn.—Resolutions regarding the death of the late Nicholas Senn were passed at the last meeting of the Chicago Gynecological Society, February 21, setting forth the indebtedness of the society and its members to the late Dr. Senn, acknowledging their obligations to him, and expressing their loss in his death.

Communicable Diseases.—The Waukegan board of health has procured 4,000 vaccine points from the State Board of Health, and general vaccination is ordered.——At a meeting of the health officers and the authorities of the University of Illinois, in Champaign, it was agreed that the local boards carry out the instruction of the State Board of Health regarding vaccination.——Smallpox is reported from Astoria, Loami, Lacon, Chandlerville and Melvin.——An epidemic of diphtheria is threatened at the Illinois Central Hospital for the Insane, Jacksonville, where 3 cases have occurred, with one death.——Diphtheria is still present in Whitehall.——The health department of Chicago discovered 4 cases of scarlet fever among the inmates of the John Worthy School, February 18.

INDIANA.

Hospital Notes.—The Good Samaritan Hospital, Vincennes, which has been built and equipped at a cost of $50,000, was thrown open to the public February 6. The lower floor contains two public wards with accommodation for six patients and five private wards; the second floor contains six private wards, a children's ward and operating apartments. An emergency operating room is located in the basement.

Communicable Diseases.—There are reported to be 400 cases of measles in Montgomery County, and several of the county

schools will be closed on account of the epidemic.——Three cases of smallpox have developed near Wawaka.——During the smallpox visitation at Alexandria, about 69 cases had occurred up to January 16. The epidemic is now believed to be at an end.——Two fully developed cases of smallpox have been discovered at Marion.——Several cases of smallpox are reported in one family in Wanatah.——"Wabash scratches" is said to be prevalent at Mexico.——There are said to be 54 cases of scarlet fever and diphtheria in Allen County.

Personal.—Dr. William H. Wishard, the oldest member of the Indianapolis Medical Society and the State Medical Society, celebrated his ninety-second birthday anniversary January 17.——Dr. T. Victor Keene, former state bacteriologist, has taken the Pasteur treatment on account of accidental inoculation from the brain of a dog suffering from hydrophobia.——Dr. Warren R. King, Greenfield, has been appointed assistant surgeon of the Indiana State Soldiers' Home, Lafayette.——Dr. Joseph F. Somes, Vincennes, is said to be seriously ill with septicemia.——Drs. Robert J. Kemper, Ferrell W. Dunn and John A. Leas have been appointed house physicians of the Deaconess Hospital, Indianapolis.

Society Meetings.—At the December meeting of the Elkhart County Medical Association Dr. J. Albert Snapp, Goshen, was elected president, and Dr. George W. Spohn, Elkhart, secretary.——The preliminary meeting for organization of the Eleventh District Medical Society was held in Peru, January 31. The following officers were elected: President, Dr. Charles H. McCully, Logansport; county vice-presidents, Cass County, Dr. Henry B. Hill, Logansport; Miami County, Dr. Edward H. Griswold, Peru; Carroll County, Dr. Charles M. Kennedy, Camden; Grant County, Dr. Daniel A. Holliday, Fairmount; Huntington County, Dr. Helen K. McIlvaine, Huntington; White County, Dr. Madison T. Didlake, Monticello; and Wabash County, Dr. Lorin W. Smith, Wabash; and secretary-treasurer, Dr. Maurice H. Krebs, Huntington. The next meeting of the society is to be held in Logansport, April 29.

IOWA.

Cows Inspected.—Beginning with February 18, all milk and cream sold in Iowa Falls must be from inspected cows. The city council on February 10 passed an ordinance requiring milk inspection as provided by the State Board of Health.

Itinerant Physicians.—The State Board of Health announces that there are now only four physicians licensed as itinerant physicians in the state of Iowa. The licenses of three of these individuals expire Aug. 23, 1908, and that of the fourth on Jan. 21, 1909.

Election.—At the annual meeting of the Iowa Society of Clinical Surgery, held in Des Moines, February 5, Dr. Wilton W. McCarthy, Des Moines, was elected president; Dr. Donald Macrae, Council Bluffs, vice-president, and Dr. David S. Fairchild, Jr., Clinton, secretary-treasurer.

Communicable Diseases.—Two cases of cerebrospinal meningitis are reported near Morning Sun, with one death.——Several smallpox patients and suspects of an itinerant band of musicians are under quarantine at Alden.—Graettinger reports two cases of smallpox.——Several cases of smallpox are said to exist near Eddyville.——On account of the prevalence of smallpox, rural school No. 7, Liscomb Township, Marshall County, has been closed.

Personal.—Dr. Albert De Bey, Orange City, has been appointed a member of the State Board of Health, vice Dr. Fred W. Powers, Waterloo, term expired.——The medicolegal committee of the state medical association, composed of Drs. David S. Fairchild, Clinton; Joseph M. Emmert, Atlantic, and Lawrence W. Lettig, Iowa City, has employed the firm of Wade, Dutcher & Davis to look after all cases of malpractice brought against members of the association.——Dr. William L. Becker, Dubuque, has been reappointed physician for Dubuque Township.

State Sanatorium.—The State Sanatorium for the Treatment of Tuberculosis, Iowa City, was opened February 1 for the treatment of pulmonary tuberculosis in the incipient stage, and now has 11 patients. The sanatorium has been completed at a cost of more than $125,000, and is equipped with all modern appliances. A very large list of applications for admission has been received, but many persons have been refused on account of the advanced stage of the disease. Inquiry in 1904 by the State Board of Control disclosed the fact that there were 8,000 cases in the state at that time, and that nearly 2,000 deaths occur each year from the disease.

Society Meeting.—The monthly meeting of the Dubuque County Medical Society was held February 10. There were 37 present. The members of the Dubuque District Dental Society were the guests of the evening. The annual dues were raised from $4 to $5. Rev. A. E. Kepford, lecturer for the Iowa State Board of Control, who had just finished a week's campaign of education against tuberculosis in the city, gave a short address and incidentally complimented the physicians of the county on their unity of purpose and the effective manner in which the public lectures were arranged and carried out. Twenty lectures on tuberculosis, many with stereopticon views, had been given by Mr. Kepford and over 5,500 people reached in this way. In addition hundreds of tracts were distributed to school children and mothers. The society committee having the matter in charge consisted of Drs. George Minges, John S. Lewis, Albert H. Blocklinger, Lily Kinnier and Mary A. Killeen. The remaining portion of the program was as follows: 1. "Anesthesia," Dr. Charles M. Linehan. Discussion by Drs. William P. Slattery, Bernard A. Michel, William L. Becker, Joseph Schrup and John M. Walker. The following doctors of dental surgery took part in the symposium: Drs. J. V. Conzett, J. F. McParland and J. A. Meshinger. 2. "Clinical Findings of Autointoxication," by Dr. Alanson M. Pond. Discussion (surgical), Dr. John C. Hancock; (medical), Drs. George A. Staples, Frank W. Wieland, Albert H. Blocklinger, Mary A. Killeen and Langworthy. 3. Demonstration of pathologic specimens.

MARYLAND.

Pure Food Law.—Dr. William H. Welch, president, and Dr Marshall L. Price, secretary, of the State Board of Health, appeared before the committee on hygiene of the House of Delegates, February 20, to urge that the enforcement of the provisions of all the pure food laws be lodged in the State Board of Health.

Drainage Commission.—William M. Hill has had a bill introduced in the legislature for the appointment of a sanitary drainage commission, consisting of the governor, secretary of the State Board of Health, commissioner of health of Baltimore, state entomologist and state geologist. This bill provides for the drainage of swamp lands, the extermination of the mosquito, and also provides for the appropriation of $25,000, of which $15,000 is to be used for drainage.

Care for the Indigent Insane.—A bill has been introduced into the legislature by Senator Gorman repealing the law by which the state is obligated to take over and care for the indigent insane beginning Jan. 1, 1909. He claims that the law is impracticable and would involve the state in enormous expense. Dr. George J. Preston, Baltimore, has protested against this action, claiming that the state treasury is in excellent shape, and that the state is well able to take care of its insane and to provide suitable quarters for them.

Personal.—Dr. Harry Nalley, Mount Rainier, has been elected medical advisor and physician to the Maryland Agricultural College, College Park.——Dr. Howard Bratton, Elkton, has been appointed a member of the State Board of Health.——Dr. Charles M. Ellis, Elkton, has been appointed a member of the board of managers for the Hospital for Consumptives of Maryland, Baltimore.——Dr. W. Frank Hines, Chestertown, has been appointed superintendent of the bureau of immigration.——Dr. John Mace, Cambridge, has been appointed election supervisor.

Baltimore.

Personal.—The governor has appointed Drs. G. Milton Linthicun, Frederick Caruthers, William T. Riley, Patrick F. Martin, Roland T. Abercrombie, Silas Baldwin, Herbert Black, Otto M. Reinhardt and Thomas Sudler as coroners of Baltimore City.——Douglas H. Thomas, Jr., Baltimore, has been appointed a member of the State Board of Health.——J. S. Ames, Baltimore, has been appointed a member of the board of managers of the Hospital for Consumptives of Maryland.——Dr. J. Dimmitt Norris has been appointed police examiner for Baltimore.——Dr. Anna V. Hoffman left for Pekin, China, February 17.

The Johns Hopkins Hospital Report.—The superintendent of Johns Hopkins Hospital reports that during 1907 there were 4,576 patients in the hospital, 2,137 males and 2,439 females. At the close of the year there were 231 white patients and 72 colored patients in the hospital. There were 4,859 persons treated, of whom 3,779 were white and 1,080 colored; 1,466 were medical cases, 1,685 surgical, 986 gynecologic and 439 obstetric. Of these 3,543 were discharged well and improved; 107 remained unimproved; 353 discharged without improve-

ment; 282 were transferred, and 271 died. The lowest mortality on record occurred during the year, 5.57 per cent.

Antituberculosis Movement.—The movement against tuberculosis, which Dr. William Osler started in Baltimore in 1904, has borne good fruit. Several institutions are now open or about to be established for the treatment of tuberculosis. Among these are the State Sanatorium, Blue Ridge, which is to be opened April 1, with accommodations for 250 patients. The work on the Jewish Hospital for Consumptives, to accommodate 60 patients, is now well in hand. The Knights of Columbus are urging to completion the Catholic sanatorium to accommodate about 60 patients. The free tuberculosis dispensary, the fifth to be established, will be opened in South Baltimore, thus giving one dispensary to every section of the city. The Instructing Visiting Nurses' Association is now supporting four nurses, who have 1,100 patients on their lists. The work is now extending to the counties, and the Maryland Association for the Prevention and Relief of Tuberculosis now has branches in four counties. In Frederick City a fund is being raised to support a visiting nurse and a dispensary. An addition is also being made to the Eudowood Hospital for Consumptives with the Bloede fund, and an addition is also being made to Bayview Hospital of a department for consumptives, accommodating 100 patients.

MASSACHUSETTS.

Contract for Hospital Awarded.—The contract for the construction of a ward building, power house and tunnel for the Consumptives' Hospital, Mattapan, has been awarded on a bid of $87,434.

Physician Fined.—Dr. Charles P. Feeley, Cambridge, formerly inspector of the local board of health, charged with having failed to report two cases of scarlet fever, while acting as medical inspector for the schools, is said to have been fined $100 February 15, $50 on each of two counts. Dr. Feeley took an appeal.

Communicable Diseases.—On account of the prevalence of measles one school in Middleboro has been obliged to close. ——Scarlet fever is reported to be epidemic in the Ingleside Home for Girls, Revere; 4 patients have been removed to the Lynn Isolation Hospital and 19 others are quarantined in the house.

Personal.—Dr. Henry J. Millard, North Adams, has been reelected medical examiner of the Massachusetts department of the G. A. R.——Dr. Frank H. Chase has been appointed city physician of Chelsea, vice Dr. E. Frank Guild.——Dr. Daniel J. Hanlon, Hyde Park, was seriously burned while saving his wife from a fire, February 10.

Publicity Not Desired.—At the annual meeting of the Essex North District Medical Society resolutions were adopted deprecating the publication in the daily press of physicians' names, in connection with their cases, operations and professional work; declaring that such publication is against the wishes of the members of the society, and that it is the duty of each physician to prevent the appearance of his name in such connection, and requesting the publishers of the daily press to omit such mention.

Society Meetings.—At the annual reunion and banquet of the Boston City Hospital Alumni Association February 15, Dr. Morton H. Prince was elected president; Dr. Henry W. Broughton, vice-president; Dr. William H. Robey, Jr., secretary, and Dr. William H. Prescott, treasurer.——At the annual meeting and banquet of the Eastern Hampden District Medical Association, held in Springfield February 13, Dr. Herbert G. Stetson, Greenfield, was elected president; Dr. Harry C. Martin, Longmeadow, Springfield, vice-president; Dr. Morgan B. Hodskins, Monson, secretary-treasurer, and Dr. W. I. G. Craig, Springfield, censor.

MINNESOTA.

Societies Meet.—At the annual meeting of the Brown-Redwood Counties Medical Society, held in New Ulm, February 5, Dr. John S. Shrader, Springfield, was elected president; Dr. Jacob W. B. Wellcome, Sleepy Eye, vice-president; Dr. William A. Brand, Redwood Falls, secretary-treasurer, and Dr. George F. Reineke, New Ulm, delegate to the state society.——At the annual meeting of the Red River Valley Medical Society, held in Crookston, January 28, Dr. J. Calvin Cummings, St. Hilliare, was elected president; Dr. Halvor Holte, Crookston, vice-president; Dr. Herbert H. Hodgson, Crookston, secretary-treasurer; Dr. Henry C. Stuhr, Argyle, censor, and Dr. Israel Lemieux, Red Lake Falls, delegate to the state society.——The Nicollet-Le Sueur Counties Medical Society held its annual meeting at Le Sueur, January 24, and elected Dr. George F. Merritt, St. Peter, president; Dr. Joseph E. Le Clerc, Le Sueur, vice-president; Dr. Jared W. Daniels, St. Peter, secretary-treasurer, and Dr. Fred P. Strathern, St. Peter, delegate to the state society.——At the annual meeting of the Clay-Becker Counties Medical Society, held in Moorhead, January 27, Dr. George W. Frazier, Detroit, was elected president; Dr. W. H. Aborn, Hawley, vice-president; Dr. Edgar R. Barton, Frazee, secretary-treasurer, and Dr. William J. Awty, Moorhead, delegate to the state society.——At the annual meeting of the Washington County Medical Association, held in Stillwater, January 15, the following officers were elected: Dr. Frederick A. Stevens, Lake Elmo, president; Drs. James H. Haines, Stillwater, and Arthur Steen, Cottage Grove, vice-presidents; Dr. Frank G. Landeen, Stillwater, secretary-treasurer, and Dr. Oscar F. Thomas, Lakeland, censor.——The Park Region Medical Society held its annual meeting in Fergus Falls, January 16. The following officers were elected: Dr. Luther A. Davis, Dalton, president; Drs. Frank J. Brabec, Perham, and Jorgen G. Vigen, Fergus Falls, vice-presidents; and Dr. Otto M. Haugen, Fergus Falls, secretary-treasurer.——The annual reunion and dinner of the Minnesota Wiener Medicalverein was held January 18 in Minneapolis. Dr. William S. Kelly, St. Paul, was elected president; Dr. Louis A. Nippert, Minneapolis, vice-president; and Dr. Charles G. Freeman, St. Paul, secretary-treasurer.——The Upper Mississippi Valley Medical Society at its meeting in Little Falls, January 21, elected Dr. Lemuel M. Roberts, Little Falls, president; Dr. Oliver T. Batcheller, Brainerd, vice-president; and Dr. Paul E. Kenyon, Wadena, treasurer.——Alpha Omega Alpha is the name of the new fraternity installed in the University of Minnesota College of Medicine and Surgery, Minneapolis. Dr. G. Marx White is the faculty member of the local organization, the remainder of the membership being composed of senior and junior students.——The Blue Earth County Medical Society held its annual meeting in Mankato, January 2. The following officers were elected: Dr. Julian H. Hielscher, Mankato, president; Dr. J. Theodore Schlesselmann, Good Thunder, vice-president; Dr. Thomas C. Kelly, North Mankato, secretary; Dr. Lida Osborn, Mankato, treasurer; Dr. George R. Curran, Mankato, censor for three years; Dr. John S. Holbrook, Mankato, censor to fill unexpired term; Dr. John W. Andrews, Mankato, delegate to the state medical association, and Dr. John Williams, Lake Crystal, alternate.——At the annual meeting of the Winona County Medical Society, held in Winona, January 7, the following officers were elected: Dr. Frederick H. Rollins, St. Charles, president; Dr. John Steinbach, Winona, vice-president; Dr. James B. McGaughey, Winona, secretary; Dr. Leland H. Munger, Winona, treasurer, and Dr. William F. C. Heise, Winona, censor.

MISSOURI.

State Society Meeting.—The Missouri Medical Society will meet at Springfield instead of at Sedalia as originally announced, May 18 to 20.

Personal.—Dr. Charles J. Orr is reported to be dangerously ill with grippal pneumonia at his home in St. Louis.——Dr. William M. Wallis, Maryville, has been appointed health officer and physician of Nodaway County, vice Dr. Francis R. Anthony.

State Sanatorium.—Work is progressing rapidly on the second (Eaton) villa and on the medical building for the Missouri State Sanatorium for Incipient Pulmonary Tuberculosis at Mount Vernon. The villa is practically completed, and it is hoped that it will be ready for occupancy by the middle of next month. Thus far the number seeking admission will not be sufficient to fill the villa.

NEBRASKA.

Society Meetings.—At the annual meeting of the Gage County Medical Society, held in Beatrice, January 7, Dr. Frank E. Osborn was elected president; Dr. Charles S. Curry, vice-president; Dr. Charles I. McGirr, secretary, and Dr. Thomas M. Triplett, censor, all of Beatrice.——At the annual meeting of the Buffalo County Medical Society, held in Kearney, January 22, Dr. Edwin L. Smith, Shelton, was elected president; Dr. Ole Grothan, Kearney, vice-president and delegate to the state society; and Dr. Joshua S. Blanchard, Kearney, secretary-treasurer.——At the quarterly session of the Howard County Medical Society, held in St. Paul, the following officers were elected: Dr. Edward R. Fletcher, St. Paul, president; Dr. Peter M. Pedersen, Dannebrog; secretary-treasurer, Dr. Wilson J. Raynor, South Auburn, delegate to the state society.—— The Johnson County Medical Society at its annual meeting, January 21, elected the following officers: President, Dr. Charles H. Ziegler, Vesta; vice-president, Dr. George J. Rubelman, Tecumseh; secretary-treasurer, Dr. C. R. Snell, Tecumseh;

censor, Dr. Sullivan Howard, Elk Creek, and delegate to the state society, Dr. Albert P. Fitzsimmons, Tecumseh.

NEW YORK.

Diphtheria in Yonkers.—Because of the outbreak of several cases of diphtheria in Yonkers, the health department has begun a complete investigation of the sources of milk supply.

Money for Hospital.—At a combination of luncheon, matinee and tea arranged by Mrs. William K. Vanderbilt for the Nassau Hospital, Mineola, L. I., more than $5,000 was cleared for the institution.

Antispitting Ordinance.—The board of health of Olean has provided an ordinance, making it a finable offense to spit in street cars, railway cars or on the floor or stairs of any store or public building, or any office or public place in that city.

Champlain Valley Hospital.—This hospital has received a bequest of $25,000 to complete a building on which $50,000 has been raised by popular subscription and already spent, and an endowment of $200,000 from the late Royal L. Smith, Plattsburgh.

Optometry Bill Again Introduced.—Senator Wilcox has introduced a bill at Albany which recognizes optometry as a profession. The committee of legislation of the Medical Society of the County of New York is active in the prevention of its passage. Heretofore this bill has been defeated.

Communicable Diseases.—At Newburgh 4 cases of smallpox were reported in 36 hours, one of the patients being a principal of a school containing 800 pupils. The school has been closed, and the board of health has commandeered a large house on the outskirts of the city, to be used as an isolation hospital.——At Peekskill 70 cases of typhoid fever are said to exist.

Personal.—Dr. Thomas A. O'Hare has been elected president; Dr. Joseph R. Culkin, vice-president; Dr. Philip Conboy, secretary-treasurer, and Dr. James P. Brady, a member of the staff of St. Mary's Hospital, Rochester.——On the retirement of Dr. Albert J. Browne as attending physician of the Masonic Home, Utica, February 6, he was presented by the superintendent and nurses with a cut-glass decanter and glasses.——Dr. Milton D. Graham, Utica, has resigned as district physician on account of ill-health.——Dr. Scott W. Skinner has been elected president of the Leroy Antituberculosis Association.

Hospital Notes.—The common council of Lockport has decided to build an addition to the City Hospital in memory of Morrison R. Evans, who bequeathed $10,000 for that purpose. ——The physicians of Lockport, at a meeting held recently, formulated plans for the creation of a staff for the City Hospital, which was formally opened February 3. Dr. S. Wright Hurd has been elected chairman, and Drs. Henry H. Mayne, Charles N. Palmer, Flavius J. Baker and William H. Hodson, members of the advisory board.——With one dissenting vote the members of the Auburn Medical Society approved the resolution to turn the Municipal Hospital into a hospital for the treatment of tuberculosis.——A permit has been issued to the Buffalo General Hospital for the building of a new hospital on the other side of Goodrich Street, to cost $35,000. The funds for the purpose were bequeathed by the late Dr. D. W. Harrington.

Meat Inspection Needed.—The Citizens' League declares there is a need for state meat inspection and regulations to restrict the spread of bovine tuberculosis. There is no effective inspection in the state, and diseased cows are killed and sold to consumers without any check on their healthfulness as food. It was evident that in a large number of small establishments which escaped adequate inspection up to the time of the passage by Congress of the law of 1906 nearly two and a half times as many tuberculous cattle were being killed and prepared for consumption, and nearly twice as many cattle affected with all kinds of diseases. The federal postmortem inspection of cattle in New York State, Oct. 1, 1906, to Sept. 3, 1907, shows the following: At establishments having inspection before July 1, 1906, total inspected postmortem, 473,411; total condemned, 451; per cent. condemned of total inspected 0.095. At establishments put under inspection July 1, 1906, total inspected postmortem, 112,549; total condemned, 343; per cent. condemned of total inspected, 0.304. In this state 138 establishments which had previously escaped federal inspection were brought under such inspection by the law of 1906. Of these 2 are in Binghamton, 28 in Brooklyn, 9 in Buffalo, 8 in Canajoharie, 1 in Cortland, 1 in Hudson, and 83 within the boundaries of the old city of New York, 2 in Rochester, 2 in Syracuse and 1 in Troy.

Bovine Tuberculosis.—Prof. Veranus A. Moore of the New York State Veterinary College has prepared a report for the joint committee on the prevention of tuberculosis of the New York Charity Organization Society and the milk committee of the New York Association for Improving the Condition of the Poor, showing the extent of the spread of bovine tuberculosis in this state. Making a total of all tests to which his attention has been called, he finds that 61.7 per cent. of 626 herds are affected, and that more than 33 per cent. of all cattle examined were affected. Professor Moore bases his conclusions on data obtained from the State Department of Agriculture and on statistics obtained from practicing veterinary surgeons throughout the state. Professor Moore says that about 2 per cent. of the affected cattle have the disease localized in the udder and that of the remainder 15 per cent. give off the bacteria at some time in the course of the disease. He recommends that the state pass more rigid laws regarding the introduction of infectious cattle into the state, providing for an equable disposition of the reacting animals, extending the power of inspection to properly qualified veterinarians and providing instructions for the owners of herds.——Five of eight cows kept on the Watervliet Arsenal Reservation were found to be infected with tuberculosis. One of the animals killed for beef showed that it was badly diseased. State Veterinarian W. H. Kelly examined the living animals and caused four to be killed.

State Hospitals.—Dr. Charles F. MacDonald states that there are in this state 29,000 certified lunatics, not to mention the large number of border-line cases who were at any time likely to require medical care and attention. The average life of the insane is twelve years and the annual per capita cost of maintenance is about $200; therefore, each person who fails to recover during this period represents a loss to the state of $2,400; whereas, a sane man for a like period represents a gain of $2,400. To-day there are fifteen state hospitals for the insane (two for insane criminals), and twenty-two licensed institutions for the insane. The whole number of committed insane in the public and private hospitals of the state at the end of the fiscal year, Sept. 30, 1907, was 29,093 (13,927 men and 15,166 women). The whole number of insane in licensed private institutions was 977. The net increase for the fiscal year in all institutions was 791; in the state hospitals, including the criminal asylums, the net increase was 799. The number of resident medical officers in state hospitals was about 150, and attendants, nurses and other employés, 5,000. The cost of the state hospitals represented an investment of more than $26,000,000, while the average annual expenditure for their maintenance was about $5,000,000. The average weekly per capita cost of maintenance was for the last fiscal year $3.53. This weekly rate was somewhat higher than the average for the whole United States, in which the number of insane was roughly estimated at 200,000.

Report of State Department of Health.—Dr. Eugene H. Porter, commissioner of this department, in his report to the governor states that there is greater activity in the protection of the streams and their purity than ever before. The system in use for many years in Massachusetts has been adopted. He predicts that in a short time there will be a complete stoppage of the pollution of the streams which now cause about 20,000 cases of typhoid yearly, with 2,000 deaths. Cohoes, Niagara Falls, Elmira, Poughkeepsie, Ogdensburg and Newburgh have been investigated and special examinations made of the topographic, geologic, industrial and sociologic conditions, together with the water supply, sewage facilities, ice and milk supplies and garbage collections. He also declares that from one-seventh to one-tenth of all the deaths and an enormous proportion of invalidism are due to tuberculosis, and states there are probably 50,000 cases and 15,000 deaths annually from tuberculosis in New York. He asks that the state grant authority to the department for a registration and necessary investigation of all cases of tuberculosis, and for this campaign an initial appropriation of $75,000 should be made. In order to check the disease the following steps have been decided on:

1. The completion of the state's tuberculosis exhibit, the one constructed last year having been shown in many places. The department should have at least three complete exhibitions to be used simultaneously in different parts of the state.
2. Participation in the International Tuberculosis Congress to be held in Washington, D. C., next September in a manner worthy of the Empire State.
3. Necessity of the registration of all cases of tuberculosis. You can not give aid to any consumptive or protect his neighbors until you know what help he requires—until the case is properly reported and the conditions described. The state should give the department the necessary authority in this matter.

The vital statistics show a death rate of 17.5 per 1,000 inhabitants, as against 17.1 for 1906, and an average of 17.2

for the last five years. Deaths from typhoid fever, scarlet fever, diphtheria, pulmonary tuberculosis have increased, and there has been a very large increase in the number of deaths from cancer. In pneumonia and measles there has been a decrease in the mortality. Dunkirk has the highest birth rate, 34.2, and Schenectady follows New York with 28.3, New York having 28.4 to every 1,000 inhabitants. He recommends that the authority to enforce vaccination be taken from the school trustees and placed entirely in the hands of the health boards. Among the more important recommendations are the following: The registration of all cases of tuberculosis; the more complete registration of vital statistics; the passage of an act enabling county authorities to maintain laboratories working in cooperation with the state laboratory and the state health department, and the enactment of a pure food law and the authorization of one department to enforce it.

New York City.

Contagious Diseases.—From January 1 to February 14, last year, there were 3,446 cases of measles and 42 deaths; this year there have been 8,117 cases, with 181 deaths. Scarlet fever is assuming almost epidemic form; last year up to February 14 there were 73 deaths; this year there have been 261 deaths.

Personal.—Dr. Ernest J. Lederle reached New York from Naples February 19.——Dr. John L. Bauer has been appointed assistant surgeon on the visiting staff of German Hospital Brooklyn.——Dr. Edwin W. Kellogg has been commissioned surgeon of the Ninth Infantry, N. G. N. Y., with the rank of captain.

Babies' Hospital.—The annual report of this hospital, just published, gives the history or records of 20 years. During this time 5,500 babies out of a total of 9,165 admitted have been discharged as cured. Last year it had 30 supported beds which yielded an income of $7,500. Last year 975 children were treated in the wards and 2,250 in the crib department for patients. The summer branch of this hospital is at Oceanic, N. J.

Society Meetings.—At the annual meeting of Kings County Medical Society, Dr. Onslou A. Gordon was elected president; Dr. Joshua M. Vancott, vice-president; Dr. Henry G. Webster, secretary, and Dr. John R. Stivers, treasurer.——At the annual meeting of the Medical Association of the Greater City of New York, Dr. Robert T. Morris, New York City, was elected president; Dr. Frank C. Raynor, Brooklyn, secretary (re-elected); Dr. A. Ernest Gallant, treasurer, and Dr. J. Scott Wood, chairman for the borough of Brooklyn.

Fatalities on Railroads and Street Railways.—The public service commission has given out the following figures for January: Car collisions, 170; persons and vehicles struck by cars, 934; boarding, 479; alighting, 416; contact with electricity, 34; other accidents, 1,888, a total of 3,921. The following injuries to persons were recorded: To passengers, 1,444; to persons not passengers, 570; to employés, 486, a total of 2,500. These are the statistics offered: Killed, 44; fractured skulls, 15; amputated limbs, 6; broken limbs, 32; other serious injuries, 91, a total of 188. The total number of accidents in December was 3,993, with 51 deaths.

New York Orthopedic Dispensary and Hospital.—During the year 1906-1907 the total number of visits made by the surgeons and nurses to the homes of patients aggregated 27,798. Patients visiting the dispensary were to the number of 18,541; the visits to patients outside the institution by surgeons, 1,744; to patients at their homes by nurses, 7,513, making a total of 27,798 visits, the largest number in the history of the institution. A cash balance of $8,799.41 was in the bank Sept. 30, 1907, available for current expenses. The surgeon's report shows that during the year ending Sept. 30, 1907, the number of patients receiving treatment was 4,085; of these 1,409 were new patients, the remaining 2,676 continued under treatment from past year. Among these were 512 cases of Pott's disease, 404 cases of hip disease, 188 of tuberculous disease of the smaller joints, 286 cases of lateral curvature of the spine, 190 cases of clubfoot, 533 cases of flatfoot, 508 cases of infantile paralysis, and the remaining number represented a great variety of deforming diseases. There were cured 443, and 209 were discharged relieved, making a total of 652 restored to useful positions. The discharged incurable numbered 9; one was discharged for neglect; 398 received home treatment, 21 died, and 3,004 were continued under treatment.

NORTH CAROLINA.

Hospital Notes.—The Asheville-Biltmore Sanatorium was reorganized February 1 with the following officers: President, Dr. Paul Paquin; vice-president, Dr. Owen Smith, and secretary, Dr. Charles L. Scott, formerly of Greensboro.——At a meeting of the Buncome County Medical Association, held at Asheville, January 22, steps were taken to insure the erection and opening in Asheville of a hospital for eruptive fevers; the widespread prevalence of scarlatina and other eruptive diseases in the state being due, in the opinion of the society, to the inefficient and necessarily lax management of the infection in private houses.

NORTH DAKOTA.

Hospital Notes.—St. John's Hospital, Kenmare, was formally opened January 18.——St. Michael's Hospital, Grand Forks, which was opened recently to the public, is a four-story brick structure, 48x112 feet, heated by steam and lighted by electricity from its plant, equipped with an electric elevator, etc. In a separate building the heat and power plant, laundry, etc., are contained. The cost of construction of the building was more than $100,000, of which the citizens of Grand Forks contributed nearly one-half.——The corner-stone of the Bismarck Hospital and Deaconess Home was laid a few days ago. The building will have accommodations for 50 patients, will, it is expected, be ready for occupancy early in the spring, and will cost about $40,000.

Society Meetings.—At the annual meeting of the Northwestern District Medical Society, held at Minot, January 21, the following officers were elected: President, Dr. Henry C. Windel, Williston; vice-president, Dr. Olin W. Rowe, Towner; secretary-treasurer, Dr. Roy W. Pence, Minot, and censors, Drs. James T. Newlove, Minot; Josiah S. Davies, Granville, and Julius Frankel, Anamoose.——At the annual meeting of the Sheyenne Valley Medical Association, held recently in Valley City, Dr. Willis C. Nolte, Dazey, was made president; Dr. Macdonald, Valley City, vice-president, and Dr. Jacob Van Houten, Valley City, secretary.——At the annual meeting of the Sixth District Medical Association, held in Dickinson, the following officers were elected: President, Dr. Charles L. Chambers, Bismarck; vice-president, Dr. William H. Bodenstab, New Salem; secretary-treasurer, Dr. Jacob Bursma, New Salem; censor, Dr. W. L. Gordon, Steele, and delegate to the state society, Dr. Victor H. Stickney, Dickinson. The society passed a resolution against unethical advertising.——At the annual meeting of the Cass County Medical Society, held January 6 in Fargo, Dr. Frederick H. Bailey, Fargo, was elected president; Dr. Henry G. Fish, Wheatland, vice-president; Dr. Albert W. Skelsey, Fargo, secretary, and Dr. Paul H. Burton, Fargo, treasurer.

OHIO.

Physician Fined.—On February 3 Dr. Frank Cowan, Ashland, charged with writing a prescription for Charles Wharton to secure whisky, is said to have been fined $250 and to have been enjoined from making prescriptions for intoxicants.

Plead for Pardon.—A number of local organizations of Dayton, including the medical societies, are said to be circulating a petition asking for the pardon of Dr. James A. Ambrose, who is serving a sentence of 18 months in the penitentiary for malpractice.

Ill and Injured.—Dr. Charles W. Stroup, village physician of Somerville, is seriously ill with smallpox.——Dr. Clarence A. Force, Attica, is reported to be ill with inoperable intestinal tumor.——Dr. James A. Park, Columbus, is suffering from concussion of the brain due to a fall on an icy sidewalk, February 5.——Dr. Samuel Nickels, a pioneer physician of Cincinnati, is reported to be critically ill.

Tuberculosis Hospital Bill Passed.—The House of Representatives on February 7 arranged to pass the Braun bill, which authorizes the establishment of a county tuberculosis hospital by county commissioners, who may, instead, contract for the care of consumptives in hospitals in other counties. The hospital is to admit consumptives from county infirmaries, and $3 a week or less may be charged patients who are able to pay.

Society Meetings.—At the annual meeting of the Butler County Medical Society, held in Hamilton, Dr. Louis H. Frechtling was elected president, and Dr. H. L. Burdsall, secretary, both of Hamilton.——At the annual meeting of the Dayton County Academy of Medicine Dr. Albert H. Lane was elected president; Dr. George D. Gohn, vice-president; Dr. Jost D. Kramer, secretary; Dr. Harry F. Patton, treasurer, and Dr. William F. Prather, censor.

Personal.—Dr. John J. Thomas has been appointed city physician of Youngstown.——Dr. Eric E. Sattler, Cincinnati, has returned after two years in Europe.——Dr. William N. Alderman, Athens, has sailed for Europe.——Dr. A. Per Lee Pease,

Massillon, has left Vigo, Spain, on his way to South America. ——Dr. George D. Lummis has been elected health officer of Middletown.——Dr. Winifred M. Johnston has been appointed city physician of Findlay.——Dr. Corliss Keller, Hamilton, has been appointed assistant house physician of Longview Hospital, Cincinnati.——Dr. Charles R. Pontius has been elected vice-president of Fremont City Hospital.

Communicable Diseases.—The schools of Blanchester have been closed on account of three fatal cases of cerebrospinal meningitis among the pupils.——Measles is reported to be epidemic at Youngstown.——Typhoid fever is reported to be very prevalent at West Manchester and vicinity, Preble County, where 44 cases have been reported, with one death. The infection is said to have been due to contaminated water from an abandoned well.——An epidemic of scarlet fever which has prevailed in Pigeon Run for some time, is now said to be under control, the schools and churches have been reopened and the quarantine has been removed from the houses.——Several cases of smallpox of mild type are reported from Columbus Grove and Gilboa.——Several cases of smallpox are reported in North Urbana.——It is reported that there are a number of cases of smallpox at Three Locks, near Chillicothe, and north of Urbana.

OREGON.

Hospital Notes.—The new Eugene General Hospital, erected at a cost of $20,000, was opened recently.——The Sisters of St. Francis have purchased a site in Baker City on which to erect a hospital to cost about $100,000.

Guilty but Recommended to Mercy.—Dr. William T. Eisen, Portland, charged with contributing to the delinquency of a minor, by performing a criminal operation on her, is said to have been found guilty, but recommended by the jury to the mercy of the court.

Personal.—Dr. Robert E. Lee Steiner, Klamath Falls, has assumed charge of the Oregon State Insane Asylum, vice Dr. John F. Calbreath.——Dr. L. L. Rowland, Salem, for many years connected with the state asylum, is reported to be critically ill.——Dr. E. W. Barnes, North Powder, sustained a severe injury to his head by a fall while traveling on the steamer *Alliance* to Portland, January 23.

Communicable Diseases.—Smallpox is reported to be epidemic throughout eastern Oregon.——Le Grande reports 20 cases, Baker City several cases, and at Durkee 25 cases have occurred.——At Clackamas Heights 9 cases of smallpox have developed.——The scarlet fever epidemic northwest of Brownsville is reported to be subsiding; only one case has recently developed.——There are several cases of scarlet fever in Pendleton.——Physicians estimate that there are 1,500 cases of influenza in Umatilla County.——The public schools of Forest Grove have been closed on account of diphtheria.

Medical Board Elections.—At the annual meeting of the State Board of Health, Dr. Alfred Kinney, Astoria, was elected president, and Dr. Andrew C. Smith, Portland, vice-president. ——Drs. Herbert C. Coffey, Portland, and Edward B. McDaniel, Baker City, have been appointed members of the Board of Medical Examiners of the State of Oregon, vice Drs. Walter E. Carll, Oregon City, and Angus B. Gillis, Salem. At the annual meeting of the board, held January 9, the following officers were elected: President, Dr. William S. Mott, Salem; secretary, Dr. Byron E. Miller, Portland, and treasurer, Dr. Robert C. Coffey, Portland.

PENNSYLVANIA.

Personal.—Dr. Milton A. Hengst, Birdsboro, is seriously ill at his home as a result of cerebral hemorrhage.——Dr. J. T. McCaskey was elected mayor of Lancaster February 17.——Dr. Richard H. Simmons, Shamokin, medical inspector of Northumberland County, has been placed in charge of the state tuberculosis dispensary, Shamokin.——Dr. Bertrand K. Wilbur has been elected to the board of health of Lower Merion Township and has been assigned to the division comprising Rosemont and Bryn Mawr.

Prevalent Diseases.—Measles continues in epidemic form in Pittsburg, where more than 1,200 cases have been reported since February 1. Measles is also epidemic in other sections of the state, and reports show that more than 40 cases have recently been reported in the vicinity of Glenside and Edge Hill. The Glenside public schools have been closed on account of the disease.——An epidemic of typhoid fever has broken out in Boswell and the disease is said to be increasing at an alarming rate. The town has a population of 1,000 and thus far 175 cases have been reported. The source of infection is attributed to the water supply.

Philadelphia.

Personal.—Dr. Albert P. Brubaker was elected president, and Drs. Charles F. Taylor and Bertha Lewis were elected trustees of the Society for Ethical Culture, February 19.——Dr. J. Torrance Rugh has been appointed consulting surgeon to the Eastern Pennsylvania State Institution for Feeble-Minded and Epileptics, Spring City.——Dr. Jay F. Schmamberg was elected first vice-president, and Dr. Samuel W. Gadd, sixth vice-president of the Philadelphia County Medical Society, February 12, to fill vacancies made by recent legislation.

Hospital Note.—The Northwestern General Hospital of Philadelphia elected the following staff February 12: Consultants:—Physician, Dr. William E. Hughes; surgeon, Dr. William L. Rodman; ophthalmologist, Dr. S. Lewis Ziegler; laryngologist and otologist, Dr. Joseph S. Gibb; genitourinary surgeon, Dr. Hilary M. Christian, and pathologist, Dr. Allen J. Smith. Visiting Staff:—Physician and secretary of staff, Dr. H. Brooker Mills; surgeon, Dr. J. Thompson Schell; ophthalmologist, Dr. Luther C. Peter; laryngologist and otologist, Dr. Carl L. Velt; genitourinary surgeon, Dr. Hugh P. McAniff, and pathologist, Dr. W. Taylor Cummins.

Health Report.—The deaths reported for the week ended February 22 was 590; a decrease of 33 from the previous week and a decrease of 60 from the corresponding week of 1907. The principal causes of death were: Typhoid, 32; measles, 4; scarlet fever, 4; whooping cough, 6; diphtheria, 11; consumption, 76; cancer, 17; apoplexy, 18; paralysis, 9; heart disease, 78; acute respiratory diseases, 105; diseases of the arteries, 10; enteritis, 20; cirrhosis of the liver, 6; acute nephritis, 6; Bright's disease, 34; puerperal septicemia, 8; congenital malformation, 6; premature birth, 6; congenital debility, 9; old age, 8; suicide, 7; accidents, 10, and marasmus, 5. There were 341 cases of contagious diseases reported, with 47 deaths, as compared with 260 cases and 34 deaths reported in the preceding week.

TENNESSEE.

Dinner to Trenton Profession.—The medical profession of Trenton was entertained at dinner by Dr. Thomas J. Happel January 24. For a number of years Dr. Happel has celebrated his anniversary by giving a dinner to the profession of the city.

Society Meeting.—At the annual meeting of the Rutherford County Medical Society, held in Murfreesboro, Dec. 4, 1907, the following officers were elected: Dr. James J. Rucker, president; Dr. Andrew J. Jamison, vice-president; Dr. Rufus Pitts, secretary-treasurer; Dr. Enoch H. Jones, delegate to the state society, and Dr. Harry C. Rees, alternate.

Communicable Diseases.—Measles is reported to be epidemic in the vicinities of Neptune, Henrietta, Chief Hill and Thomasville.——On account of the prevalence of smallpox, general vaccination has been ordered throughout Columbia and Maury counties.——Several cases of smallpox are reported in Franklin.——Smallpox is reported to be prevalent in and around Murfreesboro.——Several cases of smallpox are reported in Crossville and Harriman.——Winchester reports 14 or 15 well-developed cases of smallpox, all of mild type.——Grip and pneumonia are reported to be epidemic at Humboldt, Milton, Kenton and Trenton.

Personal.—Dr. E. William Carney, Shelbyville, fractured his arm in a runaway accident February 6.——Dr. James A. Albright, Nashville, has been re-elected secretary, and John Hamil, assistant secretary, of the State Board of Health.——Dr. Blackburn G. Tucker, Nashville, has been elected health officer of Davidson County, and chairman of the board of health. ——Dr. George W. Booker, Knoxville, has been elected physician of Knox County.——Dr. William E. Hibbett has been elected health officer of Nashville, vice Dr. Larkin Smith.——Dr. James L. Andrews has succeeded Dr. Frank S. Raymond as president of the board of health of Memphis, and Dr. John C. Bell has been made secretary of the board.

TEXAS.

Epileptic Colony.—The board of directors for the State Epileptic Colony has awarded a contract for the building of two additional brick cottages to accommodate 40 male patients.

Yellow Fever.—The steamer *Crispin*, which arrived in Galveston roads February 16 from Para, Brazil, has been placed in quarantine on account of the presence of two cases of yellow fever among its officers.

Smallpox.—Bells reports 4 cases of smallpox.——During January there were 59 cases of smallpox in Wolfe City.——The last smallpox patient in Guadalupe County has been discharged.——Several cases of smallpox are reported in Victoria. ——Helena reports several cases of smallpox.

Personal.—Dr. Edward Doak, Taylor, has been appointed local surgeon for the Missouri, Kansas & Texas Railway.—— Dr. William H. Davis has been elected city physician of Arlington.——Dr. Felix P. Miller has resigned as a member of the board of health of El Paso, and Dr. Marcus O. Wright has been appointed his successor.——Dr. George Brunner has resigned as assistant city physician of El Paso, to take effect March 1, and Dr. A. Howard Butler has been appointed his successor.

Reregistration Required.—The new Texas law providing for a single board of medical examiners likewise provides that each physician in that state, of whatever school of medicine, shall obtain a certificate from the new board previous to July 13, 1908. Any physician not securing such a certificate will not be legally authorized to practice medicine in the state, and will thereafter be liable to prosecution for practicing without a license. This measure was apparently necessary owing to the confusion which heretofore existed in the licensing of physicians. It is claimed that many irregularities have been discovered on the part of the old boards of examiners operating under the law of 1901. Every physician is urged to put in his application for a certificate as early as possible and not later than July 13, 1908.

Society Meetings.—At a meeting of the Kerr-Kendall-Gillespie-Bandera Counties Medical Society, held in Kerrville, Dr. Francis L. Fordtran, Kerrville, was elected president; Dr. Robert L. Combs, Kerrville, vice-president; Dr. W. K. Lawrence, Comfort, secretary; Dr. Lindsey K. Tainter, Fredericksburg, censor, and Dr. Ernest E. Palmer, Kerrville, delegate to the state society.——At a meeting of the Central Texas District Medical Association held in Waco, the following officers were elected: Dr. William A. Wood, Hubbard City, president, and Dr. Milton P. McElhannon, Belton, secretary. The next meeting of the association will be held in Cleburne.——At a meeting of the physicians of Brownsville, February 8, the Cameron County Medical Association was organized with the following officers: President, Dr. Frederick J. Combe, Brownsville; vice-president, Dr. B. O. Works, and secretary-treasurer, Dr. G. W. Cox.

WASHINGTON.

Society Meetings.—At the annual meeting of the Pierce County Medical Society, held in Tacoma January 7, the following officers were elected: President, Dr. Royal A. Gove; vice-presidents, Drs. Claude H. Kinnear and John R. Brown; secretary-treasurer, Dr. Edward O. Sutton, and censors, Drs. Fred. W. Rinkenberger, Frank R. Hill and Charles E. Case, all of Tacoma.——At the annual meeting of the Spokane County Medical Society, held in Spokane, the following officers were elected: President, Dr. Wallace W. Potter; vice-presidents, Drs. John G. Cunningham and Matthew B. Grieve; secretary, Dr. Carroll L. Smith; treasurer, Dr. Frank Rose, and censors, Drs. Charles S. Kalb, Wilbur W. MacKenzie and Harold H. McCarthy.——At the quarterly meeting of the Whitman County Medical Society, held in Palouse, January 20, Dr. Frank E. Whittaker, Palouse, was elected secretary-treasurer, vice Dr. Herbert M. Greene, La Crosse, resigned.

WISCONSIN.

Elections.—At the annual meeting of the Milwaukee Medical Society, January 14, the following officers were elected: President, Dr. James A. Bach; vice-presidents, Drs. George P. Barth and James Cavaney; secretary, Dr. George A. Carhart; treasurer, Dr. Robert C. Brown; librarian, Dr. James D. Madison; member of membership committee, Dr. Daniel Hopkinson, and councilors, Drs. Gustav J. Kaumheimer, William H. Washburn, Gilbert E. Seaman, Arthur J. Patek, Lorenzo L. Boorse, and Robert G. Sayle.——At the annual meeting of the Fox River Valley Medical Society, held in Green Bay, January 21, the following officers were elected: Dr. William E. Fairfield, Green Bay, president; Drs. Clarendon J. Combs, Oshkosh, and Maurice D. Bird, Marinette, vice-presidents, and Dr. Robert A. Walker, Menominee, Mich., secretary-treasurer. The society voted to postpone for one year the matter of merging in the district organization.

GENERAL.

Yellow Fever in Cuba.—A focus of yellow fever has developed in the barracks at Santa Clara; four confirmed and two suspicious cases were reported February 20, and also one suspicious case of a Spaniard from Santiago. The chief surgeon has asked for the detail of an additional medical officer.

Army Medical Corps Examinations.—Preliminary examinations for appointment of assistant surgeons in the Army, to fill 23 existing vacancies, will be held on May 4 and Aug. 3, 1908, at points throughout the country to be hereafter designated. Full information can be had on application to the Surgeon General, U. S. Army, Washington, D. C. The essential prerequisites are that the applicant shall be a citizen of the United States, of good character, between 22 and 30 years old, holding the degree of doctor of medicine from a medical school legally authorized to confer it, and possessed of at least one year's hospital training or its equivalent in practice. Complete applications for the examinations of May 4 must be in the hands of the surgeon general by April 1, and early attention is, therefore, enjoined on intending applicants.

Society Meetings.—At the regular meeting of the Manila Medical Society, held January 6, the following officers were elected: President, Dr. Harry T. Marshall; vice-president, Dr. James M. Phalen, U. S. Army; secretary, Dr. Philip E. Garrison, U. S. Navy, and councilor, Dr. Henry D. Kneedler. ——At the annual meeting of the New England Electro-Therapeutic Association, held in Boston, February 13, the following officers were elected: President, Dr. Frank A. Davis, Boston; vice-presidents, Drs. Richard J. Thompson, Fall River, and George E. Allen, Haverhill; secretary, Dr. Samuel J. Harris, Boston, and treasurer, Dr. Wallace M. Knowlton, Brookline. The retiring president, Dr. Fred H. Morse, in his address spoke in protest against the use of electro-therapeutics by fraudulent physicians, and urged vigorous action by the authorities against unqualified practitioners.

The Archives of Diagnosis.—This new contribution to periodical medical literature made its first appearance, under the editorship of Dr. Heinrich Stern, in January. It is a well-appearing quarterly review, consisting of original articles on diagnosis and prognosis, in which the various articles on given subjects scattered through the important medical journals of all countries are listed, and then commented on *en masse*. After these come a series of individual abstracts classified under various subjects and book reviews. There are no editorials. The review is purely scientific and contains no advertising pages. The quality may be gleaned from the fact that the contributors of articles to the present number are: Delancey Rochester, L. Harrison Mettler, Thomas F. Reilly, Marcell Hartwig, Henry Wald Bettmann, H. J. Boldt, J. H. Carstens, C. Greene Cumston, F. M. Johnson, A. Ravogli and Seymour Oppenheimer. The general retrospects are by S. Phillip Goodhart and Wilhelm Mueller. The first issue is one of remarkable promise. The publication office is New York City.

CANADA.

Health Bureau for Canada.—Dr. Judson B. Black, Windsor, M.P. for Hants, N. S., proposed a resolution in the Canadian House of Commons, February 5, calling on the government to perfect an organization and create a department of public health, whereby all matters in connection with the health of the dominion would be consolidated under one responsible head, instead of, as at present, being scattered through five or six other departments. All the medical men in the house spoke strongly favoring the resolution, but the debate was adjourned before the government stated its position on the subject.

The Victorian Order of Nurses.—The year 1907 has seen a steady increase in the extent and scope of the Victorian Order of Nurses in Canada. In Montreal the number now employed is 17; and during that year 2,912 patients have been attended. The nurses made in connection with these persons 29,073 visits, answering 929 night calls. The receipts of the order in Montreal were $10,938.66; and the expenditures, $10,431.14. In Toronto in the past year 312 physicians employed these nurses. The number of persons attended was 2,219. Montreal has adopted a new system of school inspection whereby nurses visit the schools and give treatment to pupils when required, under the direction of the medical health office.

Smallpox.—At the annual meeting of the Ontario Board of Health in Toronto during the week ended February 15, Dr. Charles A. Hodgetts, Toronto, secretary of the board, stated there had been an increase in smallpox in the province in 1907 over the year 1906. Although the total cases reported was 833, it, according to the secretary, does not represent the actual number of cases in the province in the year; for as the result of inquiries it has been learned that there have been undoubtedly many cases which had not even been treated by a

physician, while others had been concealed for fear of quarantine. In January there were vaccinated in Winnipeg by the health authorities 971 persons, and there had been 37 cases of smallpox in that city since the first case was discovered early in December. Of the persons who had the disease only six had been vaccinated.

Personal.—Dr. A. D. Unsworth, superintendent of the Mountain Sanitarium, Hamilton, Ont., has resigned and gone to Europe for graduate work.——Dr. John Stewart, Halifax, N. S., has returned from Europe.——Dr. Thomas A. Davies, Toronto, has returned from abroad.——Dr. J. G. McKay, Montreal, has been appointed assistant superintendent at the Provincial Hospital for the Insane, New Westminster, B. C.——Lieut.-Col. G. Carleton Jones, M.D., director general of the army medical service, Ottawa, was tendered a banquet in Toronto February 5, by the officers of the army medical corps in Toronto.——Dr. Jean Phillippe Rottot has retired from the deanship of the medical faculty of Laval University, Montreal, which he has held since 1891.——Dr. E. J. Turnbull, who for the past two years has been assistant physician at the Protestant Hospital for the Insane at Verdun, Quebec, has resigned and has been succeeded by Dr. Robert King, Montreal. ——Dr. Forrestor of the Mimico (Ont.) Provincial Hospital for the Insane has been appointed assistant superintendent at a similar institution at London.

Hospital News.—The Nicholas Hospital, Peterborough, Ont., which was endowed to the extent of $200,000 by the Charlotte Nichols estate, has recently received an additional grant from the same source, which with the income from pay patients and the grant from the Ontario government, will make the institution self-sustaining.——A free dispensary has been started in Winnipeg, Man.——Glengarry private hospital, Montreal, which has been conducted for a number of years by Dr. Fernand Monod, has been closed and Dr. Monod will practice with his father in Paris.——The General Hospital at Brandon, Man., may be closed for want of funds. The total indebtedness of the hospital is placed at $29,000. The total amount received from municipal and government grants last year was $11,272. There were not so many patients treated as in 1906.——The Royal Jubilee Hospital at Victoria, B. C., is looking for more money. At present Victoria contributes $5,000 a year to the hospital; and the council will be asked largely to increase this grant. During December 78 patients were admitted, of whom 59 were treated free of cost.——The Manitoba legislature, now in session, is considering the question of the grants to the various hospitals of the province.——Delegates representing the various hospitals recently conferred with the government and it was suggested that a minimum of $1 per day should be provided by municipalities for each of their charitable patients. ——The Protestant Hospital for the Insane at Verdun, Que., has been presented by Dr. James Douglass of New York with a farm adjoining the institution, valued at $42,000. Dr. Douglass is a son of Dr. James Douglass, who for a long time was identified with the Beauport Asylum.——Last year between 600 and 700 children were treated in the various wards of the Winnipeg hospitals, so a movement has been started in that city toward the establishment of a hospital for children only. ——The number of patients treated in the Royal Victoria Hospital, Montreal, during 1907 was 3,398, a decrease of 46 from the previous year. Of these 1,994 were Protestants, 1,071 Roman Catholics, 290 Hebrews, and 43 of other faiths. There were 1,656 free patients and 1,280 public ward patients, paying 50 cents and $1 per day. There were 462 private ward patients. The total days' hospital stay were 81,902. On Jan. 1, 1907, there were 224 patients left in the hospital from 1906. During the year 3,404 were discharged, of whom 1,897 were well, 1,002 improved, 165 not improved, and 123 not treated. The deaths numbered 217, and of these 71 took place within forty-eight hours of their admission. During the fourteen years this hospital has been in existence it has treated 36,524 patients. In the out-patient departments the number of patients treated during 1907 was 4,156. The total per diem cost per patient was $1.79.——During 1907 the Toronto General Hospital treated 1,098 city-order patients; St. Michael's, 719; Grace, 231, and Western, 253. In view of the fact that the three latter are asking Toronto's city council for grants of $50,000 each, Dr. Charles Sheard, the city medical health officer, asks for a written agreement that the money granted will be spent on city patients and not for a scheme of general improvement.——The Hospital for Sick Children, Toronto, is asking the city council to raise its annual grant from $10,000 to $16,000.——The annual meeting of the Protestant Hospital for the Insane at Verdun, Que., was held in Montreal recently. At the beginning of 1907 there were 507 patients in the hospital, while at the opening of 1908 there were 533, 284 men and 249 women. The admissions during the year numbered 168. The discharges numbered 104 and the deaths 39. The total receipts from all sources amounted to $118,269, and the expenditures, $121,641. In his report Dr. Burgess, the superintendent, emphasized the need for drastic preventive measures to offset the growth of insanity, both as to heredity and immigration.——There is a proposition before Grace and the Western hospitals, Toronto, which is also being discussed by the city council, looking toward the amalgamation of these two hospitals, preliminary to a prospective grant of $100,000 to the institutions. The Western Hospital has a fine site for a large hospital, and in the event of amalgamation taking place, the present Grace Hospital building would be abandoned.——The Toronto General Hospital will shortly open its outdoor department, a short distance from Toronto University. Temporary quarters will be occupied until the new hospital buildings are erected.

FOREIGN.

Fifth Pan-American Medical Congress.—This congress is to meet at Guatemala, Aug. 6 to 10, 1908, and arrangements are being made for twenty-one sections. English, Spanish, French and Portuguese are the congress languages, and articles intended for the congress must be in the hands of the secretary, Dr. José Azurdia, Escuela de Medicina de Guatemala, before July 15. The last Pan-American congress was held at Panama in 1905, except for the delayed contingent, whose steamer broke down, and whose "proceedings" in their improvised "congress" on board were accepted as part of the regular congress.

Smallpox in China.—The Pekin correspondent of the *Lancet* states that every winter sees a recrudescence of smallpox in China, and suggests that perhaps it is caused by the Chinese taking their winter clothes from the pawnshops. These garments consist of two layers of cotton between which is a thick layer of cotton wool. In North China inoculation is still practiced to some extent, though in recent years it has been supplemented by calf lymph, a supply of which has been imported from Japan. At various points throughout Pekin the government has established vaccination stations where those who care to submit themselves can be vaccinated without any regard for asepsis.

Fourth International Congress for Medical Electrology and Radiology.—The first international congress was held at Paris in 1900, the second at Berlin in 1903, and the third at Milan in 1905. The fourth is to convene at Amsterdam, Sept. 1 to 5, 1908, and will be accompanied by an exhibition of appliances for clinical and laboratory work and collections of skiagrams, etc. Professor Wertheim Salomonson is president of the congress, and Dr. J. G. Gohl, Vondelstraat 53, Amsterdam, is the general secretary. Membership in the congress is open to all taking an interest in the development of the electrobiologic and radiologic sciences. English, French and German are the congress languages, and the membership fee is $5.

Publication of Ancient Medical Writings.—Prof. H. Diels of Berlin is said to be mainly responsible for the inauguration of the publication of the works of the great medical writers of antiquity, although several scientific academies are to cooperate in the undertaking. It will require, he estimates, from sixteen to twenty years. The collection is to be called the "Corpus medicorum," and is to be published by the firm of B. G. Teubner, who are now issuing the comparatively recently discovered works of Philomenos on pharmacologic subjects. The *Allg. med. Ct.-Ztg.* states that the Greek writers will fill thirty-two volumes, Hippocrates requiring two and Galen thirteen. The Latin writers are to be issued under the auspices of the Puschmann endowment for the history of medicine.

Nostrums in Japan.—It appears that proprietary medicines and civilization, to some extent, go hand in hand. It is well known that Japan has been extraordinarily apt in acquiring western civilization. Perhaps much of it is veneer, but it can not be gainsaid that in the art of war and in the tricks of the trade, Japan has now little or nothing to learn from her erstwhile teachers. With the advent of civilization has come into existence in Japan a remarkably flourishing business in nostrums of all descriptions, and it is said that the wily Japanese is capable of meeting on equal terms the American vendor of proprietary medicines. It has been frequently said that the first products of civilization to be introduced to a primitive race are the Bible, gunpowder and whisky. It would seem that in some instances, as in the case of the Boers and the Japanese, "patent medicines" follow gunpowder and whisky; whether they are as harmful it would be hard to say.

Suits Against Irregulars in Germany.—A cigar manufacturer in Germany has been posing as a "nature healer" at Küllstedt for the last five years; among his patrons was a woman of 62 whom he treated for articular rheumatism by ordering collodium cantharidatum for application to the hands, with salicylic acid and aspirin internally. He gave her no warning in regard to the local application, which she industriously applied to her hand, with the result that the hand is now stiff and comparatively useless. He was sentenced to six weeks' imprisonment. The *Allg. med. Centr.-Ztg.* comments on the way with which these irregulars, who claim to heal without drugs, do not hesitate to make use of the remedies of the "old school" which they are constantly assailing. The defendant has a brother who is also plying a lucrative trade in "nature-healing. . . . The proprietress of a so-called magnetic healing institute at Hanover was recently fined $7.50 for advertising extravagant claims.

Physicians in Japan.—The *Cor.-Bl. f. schweiz. Aerzte* published recently a report from the Swiss consul at Tokyo containing the official figures in regard to the medical profession in Japan. It states that in 1903, 1,456 physicians received licenses to practice, including 17 who presented diplomas from some foreign medical school. At the end of the year there were 34,611 physicians and 706 dentists engaged in practice, including 83 graduates of foreign medical schools, 33 foreign physicians. This was an increase of 740 over the number of the preceding year, and gives one physician for each 1,348 inhabitants; in the city of Tokyo, there is one to 810. During the year, the report states, 187 physicians came into conflict with the laws and 102 were sentenced, 12 more than in the preceding year. In 71 instances the penalty was for disregard of the very rigorous laws in regard to contagious disease. The penalties were withdrawal of the right to practice, permanently or for one to six months. The consul adds that the Japanese do not hesitate to burn down a whole quarter when it becomes a focus of infection, the expense of rebuilding and refurnishing being very small, owing to the prevailing style of architecture. He adds that the Japanese are remarkably docile in such matters, and that the daily hot bath, taken even by the poorest, is an effectual factor in repressing the spread of disease.

Physician Sentenced for Pharmacologic Ignorance.—Dr. B. of a small town near Aschaffenburg was attending a child with measles and purpura; on the request of his parents, Dr. K., the district physician, was called in consultation. Dr. K. advised that the child should be given 150 gm. of "Mixtura sulfurica acida" (sulphuric acid mixture or Haller's acid elixir), the average dose of which is 8 minims. The attending physician was not acquainted with this preparation, and wrote on the prescription, "Dose, a teaspoonful every hour." The child vomited freely after the first dose and died in great pain the next day. Suit was brought against the attending physician, and he stated that he was not acquainted with the remedy and had no book at hand to inform him in regard to the dosage, but claimed that he had shown the prescription to the consultant, and as the latter had made no remark, he supposed his dosage was correct. The consultant stated that he had not read the prescription and was not aware that the other physician was not familiar with the preparation. The court decided that the attending physician had done wrong in not inquiring of the consultant in regard to the composition and dosage of the preparation before prescribing it. The prosecution asked for $25 fine or ten days' imprisonment, but the final verdict was a fine of $12.50 or five days' imprisonment. The verdict was milder on account of the assumption that the drug had only injured the health, but was not responsible for the death of the patient.

LONDON LETTER.

(*From Our Regular Correspondent.*)

LONDON, Feb. 15, 1908.

Presentation to Lord Lister.

The Liverpool School of Tropical Medicine has presented to Lord Lister the Mary Kingsley medal which was struck by the school for presentation to distinguished savants and others who have aided the cause of combating disease in the tropics. In the letter of presentation it is stated that no one has accomplished more for this cause, or indeed for the whole cause of medicine, than Lord Lister.

Examinations in Hygiene.

A series of examinations in hygiene has been organized by the Incorporated Institute of Hygiene of London which should stimulate the acquisition of knowledge in regard to those important subjects which affect the health and well-being of the people, and which may be expected also to have most beneficial and far-reaching results on the physical fitness of the race. These examinations will be held at the leading centers throughout England, Scotland and Ireland, and are of special interest to women, as they will include not only the necessary examination showing general proficiency in hygiene, but the following additional honors subjects, viz.: The hygiene of the home; the hygiene of motherhood; the feeding and rearing of children; food and cooking; home nursing and first aid; school hygiene; physical training. The future heads of households are those to whom this syllabus particularly appeals, as the young women of the country have much to learn in connection with personal and domestic hygiene. Great Britain is first in regard to water supplies, drainage and public health generally—largely due to the effective efforts of the health officers—but in personal and domestic hygiene it lags behind other countries and especially France, where cleanliness, cooking and other branches of hygiene have been studied and practiced for so many years that they are now assimilated in the habits of the people. Every assistance and encouragement will be given to candidates—who may carry on their studies at school, college or at home. They will receive the certificate of the institute for proficiency in elementary knowledge and the diploma of the institute for proficiency in advanced knowledge should they pass the examination.

Successful Action Against a Local Authority for Contamination of a Well with Typhoid Sewage.

Dr. J. C. Ferguson, proprietor of a hydropathic establishment at Malvern, has won an action against the district council under peculiar circumstances. In May, 1905, an outbreak of typhoid fever occurred in this establishment involving fourteen persons, of whom several died. This was found to be due to the water supply. As in his prospectus he guaranteed the perfection of his sanitary arrangements, an action was brought against him by the family of one of the patients who died and he was mulcted in damages to the extent of $5,000. This case was reported in THE JOURNAL. Other claims followed and he had to pay in all $35,000 to the various persons. Dr. Ferguson therefore brought an action for damages against the district council on the ground that the outbreak was caused by pollution of the well from which he obtained water by sewage under the control of the council. The jury found that the council was guilty of negligence in allowing sewage to escape from the sewer and assessed damages at $37,500. Although the responsibility of local authorities for polluting water has been established in various trials, no case appears to have been recorded in which responsibility has been fixed on them for polluting a private supply of drinking water.

VIENNA LETTER.

(*From Our Regular Correspondent.*)

VIENNA, Feb. 10, 1908.

A Night Fee for Druggists.

The filling of prescriptions and the purchase of pharmaceutical preparations after regular business hours has become such a burden on druggists in Austria that efforts have been made to remedy it. The government now permits registered pharmacists to charge a uniform night fee of 50 hellers (about 10 cents) in addition to the regular price of the prescription. In cases of emergency the physician may add the letters E. N. (expeditio nocturna) to the prescription, which makes the dispensing free from the night tax.

To Prevent Phosphorus Necrosis.

New rules have been issued by the government regulating the manufacture of matches where yellow phosphorus is used, the old regulations being insufficient. The most important changes are as follows: No person under 17 years of age and no woman more than five months pregnant nor within six weeks after childbirth, is allowed to work on the premises. The factory hands must change their occupation at least every four weeks so that they work alternately in the mixing department, the wood preparing department and the assorting department. Double doors must separate the departments and the ventilation must be examined daily. Special suits of clothes, separate washing rooms and utensils for mouth rinsing must be at the disposal of the workers. Material for first aid as well as antidotes for acute poisoning must be ready at hand. A dentist, paid by the manufacturers, must regularly inspect the teeth of the factory hands. The number of cases of phosphorus necrosis reported during the decade 1895-1905 was 382 for the three largest Austrian factories.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Arthritis.

Treupel, in the *Münchener med. Wochenschrift*, Sept. 24, 1907, reports on clinical observations made on 529 patients suffering with various forms of articular rheumatism. Four hundred and seventy-one patients having acute or subacute articular rheumatism were treated with salicylates, by the mouth or intravenously, and with local hyperemia. The sodium salicylate was always at first given internally, and when this failed to be of benefit, after five or six days, it was used intravenously. If it then failed, other salicylic preparations were tried.

Of several salicylic preparations used, none acted better than the sodium salicylate. During the first two days from 4 to 6 grams (1 to 1½ drams) of sodium salicylate were given each twenty-four hours. As soon as there was improvement the quantity was reduced to 3 grams (45 grains) in twenty-four hours, and this amount continued until the temperature was normal and there was no more pain. It seemed to be demonstrated that pure sodium salicylate does no harm to the kidneys.

Besides the above medication, in all of the 471 patients the painful joints were given rest and as much immobilization as possible. The use of cotton bound around the joints and fixation by bandages and cushions also did good by inducing a local hyperemia. Hot air and venous stasis proved valuable.

Antistreptococcic serum treatment was not encouraging, Treupel believing that the general and local bactericidal treatment is met by salicylic acid.

GONORRHEAL ARTHRITIS.

Dr. Robert N. Willson of Philadelphia, in the *Boston Medical and Surgical Journal*, Nov. 7, 1907, says that "gonorrhea is not merely a local infection of the urethra, but in every case it is a systemic infection of the blood and lymphatic glands."

Treupel (*Münchener med. Wochenschrift*, Sept. 24, 1907), says that besides the healing of the primary disease in gonorrheal arthritis, the chief reliance should be placed on venous hyperemia, hot air, and later, massage and baths.

In an editorial of the London *Lancet*, Oct. 12, 1907, a discussion of the above subject by the Société Médicale des Hôpitaux of Paris, on July 26, 1907, is quoted. Dr. Queyrat described a method of treatment of this disease "which, if practiced from the onset, enables the patient to walk with ease at the end of three weeks, and prevents the stiffness and ankylosis which so frequently occur." The treatment advised is: "1, Early aspiration; 2, energetic counter-irritation; 3, early movement."

1. After shaving and rendering the skin aseptic, aspiration is performed on the outer side of the joint about two fingers' breadth below the patella. Aspiration should be done early, as later the fluid has changed to a fibrinous mass and could not be drawn off. A large needle (3 millimeters) is used, and the quantity of liquid removed may vary from 50 to 100 c.c. Queyrat has aspirated such knee joints 200 times without any ill result. After the puncture he applies the pointed actual cautery 200 to 400 times and sears the puncture by cauterizing it; then he applies compression to the joint. Four days later progressive movements are begun, and for this purpose he uses a pulley and weight apparatus, the patient lying in bed. This exercise prevents the muscles from atrophying, performs extension of the knee, and hastens the absorption of the residue of articular effusion.

At a meeting of the Section on Surgery of the New York Academy of Medicine, held May 3, 1907, the serum treatment of gonorrheal arthritis was discussed (*Medical Record*, Oct. 26, 1907).

Dr. John Rogers stated that the antigonococcus serum found best was that prepared from the sheep, and the dose of an active serum is about 2 c.c. (30 minims). This was injected "into the loose subcutaneous tissue between the deep fascia and skin in the back of the upper arm, first on one side, then on the other, at intervals of from two to six days." If thorough asepsis was maintained and the serum was clear and not contaminated, suppuration would not occur. Following the local reaction there would be an increase in the joint symptoms for a few hours, which was later followed by more or less marked improvement. Rogers stated that "in cases treated early in the disease, before there had been time for much effusion or anatomic changes, two or three of these injections at intervals of 24, 48 and 72 hours, might effect a complete cure, but the urethritis or the original source of the infection should not be neglected, as the serum had little or no effect on it, and unless the usual local antiseptic and astringent treatment was energetically carried out, a reinfection or recrudescence of the metastasis could be expected."

Patients who had had gonorrheal joint symptoms for several weeks might require a dozen or more injections, but "in at least 75 per cent. of all of the acute or subacute or early chronic forms of the disease success might be expected." The failures would be in those individuals suffering from a mixed infection, and the chronic gonorrheal joints were not helped.

Dr. John Torrey, in the same discussion, confirmed the opinion of the previous speaker that "the antigonococcus serum exercised a specific curative influence in a high percentage of cases of gonorrheal rheumatism." The serum had been used in 70 patients with gonorrheal arthritis with 55, or 78 per cent., either entirely cured or much improved. In the remainder there was slight or no improvement. The average number of injections per patient was 5, and 20 individuals were cured in 10 days or less. Even some of the chronic cases were improved, though it required many more injections, and the improvement was tardy.

Pleurisy with Effusion.

Sir James Barr, in the London *Lancet*, Nov. 9, 1907, discusses at length the physiology and dynamics of the lungs and pleural spaces.

He says "owing to the marvelous provisions of Nature the two lubricated pleural surfaces can move freely over one another, but any force that separates them must be greater than the atmospheric pressure in the lungs. It takes at least an atmosphere to separate the two pleural surfaces, and when the surfaces are separated by fluid, it must have been secreted at a greater pressure than the atmosphere."

He believes that every attack of pleurisy is due to some micro-organism or its toxin, and that even a pleurisy following an injury means that the part has become more vulnerable to such organisms. He, also, believes that it is important to decide if possible to what germ the pleurisy is due, and that in pleurisies due to chronic illness, as granular kidney, the germ or toxin present attacks the pleura because its vitality is diminished. He finds that a vast majority of pleurisies are tuberculous, but a considerable number are rheumatic or due

to pneumococci, streptococci, staphylococci the colon bacillus, typhoid bacilli, the influenza bacilli, etc. Many of these organisms may be readily found in withdrawn serous fluid, but not the tubercle bacillus. If there is a tuberculous focus elsewhere, especially in the lungs, and tubercle bacilli in the sputum, of course the presumption is that the pleurisy is tuberculous. If no such causative evidence is present, he advises "adding a little citrate of sodium to the withdrawn fluid to prevent coagulation, then centrifuging and examining the sediment for leucocytes, tubercle bacilli and other microorganisms." If pleurisy "is tuberculous the cells will be mostly lymphocytes, whereas if it is due to other microorganisms the polymorphonuclear cells will predominate." Even in undoubted tuberculous, pleurisies the tubercle bacilli may not be demonstrable in the fluid, but, as is well known, injections into a guinea-pig will demonstrate the presence or absence of tubercle bacilli in three or four weeks. He also recommends a white blood count, as in tuberculous pleurisy there is no leucocytosis, while in other pleurisies there is. If the fluid withdrawn from the chest contains blood, the cause of the pleurisy is probably tuberculous, or due to a malignant growth.

"Dry pleurisies are frequently tuberculous, though not necessarily so. In these dry pleurisies there is a small effusion of plastic lymph which is gelatinous in appearance and consistence, and contains a large number of cells with a relatively small amount of fibrin. This effusion quickly organizes and joins the two pleural surfaces together."

These "dry pleurisies require very little treatment except some counter-irritation, a diaphoretic, a purgative, perhaps a sedative to relieve the pain, or some strapping of the chest to limit the amount of movement."

Barr believes that it is difficult to say exactly when an effusion should be removed, and that in tuberculous pleurisies the fluid can remain a little longer to perhaps the advantage of causing a tuberculous lung to be quiescent. He also believes that the aspirator should not be used except with great care, as the suction pressure is great enough to cause considerable congestion of the lung tissue which may tend to encourage the spreading out of the tuberculous pus and perhaps cause acute infection from tubercle bacilli. He, therefore, advises the use of a trochar, thus withdrawing the fluid slowly by siphonage, so that the patient shall not feel any discomfort from its withdrawal. When all the fluid is withdrawn he injects "4 cubic centimeters (1 fluidram) of adrenalin solution (1 to 1,000) diluted with 10 cubic centimeters (2½ fluidrams) of sterile physiologic saline solution," and leaves this in the pleural cavity.

If there is any discomfort to the patient from the withdrawal of the fluid, he introduces a little sterile air into the pleural cavity, but this would require such good judgment as to when it is necessary and how much should be introduced, as to preclude its use in the majority of cases. On the other hand, when the fluid has been long left in the pleural cavity, and from the adhesions of the lung it is impossible for it, at least immediately, to expand to the full capacity of the chest, there will occur sufficient negative pressure in the pleural cavity, after the withdrawal of the liquid, to in the first place cause sinking in of that side of the chest; secondly, not only the replacement of the pushed-over heart but perhaps even a displacement of it to the affected side, and lastly, a dilatation of the blood vessels in the pleura. Hence, under such conditions, as Barr emphasizes, the introduction of sufficient sterile air to prevent these undesired occurrences is doubtless good treatment.

There are few more disagreeable medical mistakes than a neglected pleural effusion; whether the fluid is ultimately withdrawn or whether it is finally absorbed, a portion of the lung is often permanently carnified, the rest of the lung respiring at a disadvantage, the chest contracted, the shoulder drawn down, the heart displaced, and more or less permanent invalidism, and, often, a future tuberculosis ending the clinical story.

It is so simple with an aspirating needle to determine whether or not there is fluid when there is any doubt, that the omission of the diagnosis of a large amount of fluid in pleurisy is inexcusable.

When a compressed lung does not immediately return to its full size, breathing exercises should be inaugurated, and even, perhaps, the use of the pneumatic cabinet should be considered.

Barr advises that common salt, sodium chlorid, should be eliminated as much as possible from the diet, he believing that in its absence the pleural fluid does not so readily recur. When there is believed to be a large quantity of fibrin in the pleural cavity, he advises the use of lemons, citric acid, or the citrate of potassium, calling these "decalcifying agents." The citrate of potash acts, also, as a diuretic, and may be given as follows:

℞.	gm. or c.c.		
Potassii citratis	40	or	ʒi
Aquæ	200		fl ʒv

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

If the heart's action is weak and the arterial tension low, the potassium citrate may be combined with digitalis, as:

℞.	gm. or c.c.		
Potassii citratis	40	or	ʒi
Infusi digitalis	200		fl ʒv

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

Pharmacology

Honesty in Advertising.

As a part of the reform in business matters, greater care is being taken that advertising be made honest and truthful. The Associated Advertising Clubs of America, at a convention in Cincinnati, adopted resolutions opposing fraud in advertising. They did this as a simple business proposition, taking the ground, in the preambles, that all business in general is harmed if the public can not depend on the truth of advertising matter, and that every legitimate, conscientious and capable advertising man must feel it his duty to assist in protecting the public by eliminating incompetent and unscrupulous hangers-on of the advertising profession, and by promoting truthful advertising. They, therefore, endorsed for enactment in all states a law to prohibit advertisements of damaged goods, fire sales and bankrupt sales when the merchandise offered does not come truthfully under these heads; advertisements in which quality is exaggerated or misrepresented; those which announce "no cure, no pay," and those which proclaim superior skill and enumerate symptoms of disease which are to be "cured." This is another indication that in the future the reader of advertisements is more likely to have a square deal.

Roche's Embrocation.

HUMBOLDT, TENN., Feb. 10, 1908.

To the Editor:—Kindly publish formula of Roche's Herbal Embrocation, a "patent medicine" made in England. It is vaunted by its promoters for whooping cough and, of course, people unacquainted with the facts are prone to grasp at anything, however irrational, which promises relief.

G. W. PENN.

ANSWER: Roche's Herbal Embrocation is an English "patent medicine," exploited in this country by E. Fougera & Co., of New York. Not only is it recommended by its promoters for whooping cough, but also as being "very effective" in lumbago, rheumatism, bronchitis, etc.! As to its formula, the

following appeared in THE JOURNAL, Aug. 17, 1907, page 617: Roche's Embrocation is a nostrum and its exact composition is not known. From published formulas it appears that it is prepared by digesting a fatty oil with asafetida. The following formula for a similiar preparation has been published: Coarsely powdered asafetida and alkanet, each 5.0 gm. (75 grains), are digested, with olive oil, 180 gms. (6 fluidounces), during eight days and then filtered. To the clear filtrate are added oil of caraway, oil of turpentine, each 9.0 gm. (2.25 fluidrams), oil of pine needles, 1.2 gm. (18 minims), and oil of bergamot, 0.8 gm. (12 minims). Another published formula directs that 2.5 gm. (38 grains) asafetida be digested for a few hours with 60.0 gm. (2 ounces) olive oil; the clear oil is decanted and mixed with 2.0 gm (30 minims) each of oil of caraway and oil of turpentine, and a few drops of oil of bergamot.

LEHN & FINK'S METHODS.

How They Advertise and How the Testimonial Market Is Supplied.

By a curious coincidence we received by the same mail two communications from physicians in different parts of the country regarding the advertising methods of Lehn & Fink of New York City. One of our correspondents, Dr. John A. Hawkins of Pittsburg, Pa., who enclosed a letter from Lehn & Fink to which we refer below, calls attention to this firm's method of reaching physicians. Dr. Arthur R. Elliott of Chicago, who sent the other letter, shows the attitude of Lehn & Fink toward the public. Dr. Elliott's letter is so illuminating that we give it in full:

To the Editor:—The enclosed two pamphlets were received through the mail recently by one of my patients and he being very much impressed by their contents and fully persuaded that he had "uric acid poisoning," brought them to me to ask my advice about the advisability of at once beginning treatment. The one marked "Fourth Series" was received first and prepared the way nicely for its successor. It is apparent that the profession now being able to discriminate between the truth and poetry regarding uric acid, Lehn & Fink, who for so long a time have sought our favors, have decided that it will be more profitable for them to work the public direct. I would particularly invite your attention to the effusion in the second pamphlet by Edward P. Adams, a member of the American Medical Association. [While the article written by Dr. Edward P. Adams states under the title that he is a member of the A. M. A., this information, like much of the "scientific" matter in the article, lacks the element so essential for conviction—truth. He is not a member.—ED.] and more especially to the footnote on page nine. [This footnote is referred to later. It has reference to the author's willingness to give advice by mail. —ED.] This comes precious near being quackery. It seems to me that the conduct of this firm should be brought to the attention of the profession.

ARTHUR R. ELLIOTT.

It appears from the enclosures that the firm in question is at present "pushing" Piperazine Water—advertised as a gout and rheumatism "cure." To awaken interest in this preparation two series of pamphlets are published. One, entitled "Notes on New Remedies," is sent, presumably, only to physicians; the other, which presents a gaudier appearance and a more attractive cover, is sent through the mails to the public direct. Each of these publications contains an eleven or twelve-page article by Edward P. Adams, M.D., of Cincinnati. This gentleman's articles are written to suit his audience. In "Notes on New Remedies" he discusses learnedly—for physicians—the causal relation of uric acid to gout and rheumatism, and gives—for physicians—an imposing bibliography in the most approved style. In the other series he discourses fluently —this time for the public—on "Uric Acid Diseases and Their Treatment with Piperazine Water." In yet another pamphlet of the same series the "Cause and Cure of Rheumatism and Gout" are popularly discussed—also for the public—and his readers—still the public—notified, that *"the author is at liberty to give advice by mail!"* [Italics ours.—ED.]

The question may arise in the physician's mind as to how Lehn & Fink obtain these voluminous testimonials exploiting their products. Dr. Hawkins enclosed with his letter a communication he received from Lehn & Fink which sheds some light on this subject. We give it in full.

Dear Sir:—Our attention has been directed to the December issue of the *Proctologist*, in which there appears your paper on constipation. We have read this with very much interest, particularly that portion where you make reference to the value of phenolphthalein. From the wording of this portion we infer that you may have mentioned the preparation Purgen[1] also, and that probably the editor cut it out when the article was published, in fact, we have been told as much.

Under separate cover we are sending you the latest issue of our publication, "Notes on New Remedies," which is just off the press. We should have been very pleased to reprint in full your paper in our "Notes" had it not been mutilated in the way we assume. We accordingly desire to ask if you can not find it within your time and inclination to prepare an original communication, treating of the use of Purgen in intestinal troubles, for publication in the next issue of "Notes."

We should value such a paper highly and we are sure our readers, who number some 16,000 among the most representative of the medical profession, would likewise appreciate the information that you may give. *Our customary remuneration for papers of this character is $10.00 per printed page.* [Italics ours.—ED.] which we are pleased to offer you if the offer meets with your approval. Awaiting your early reply, we are,

Very truly yours,

LEHN & FINK.

This letter causes one to wonder whether the twelve-page disquisition on the "Treatment of Gout and Rheumatism with Piperazine," by Dr. Edward P. Adams, is really, what it purports to be, a scientific article of general interest to the medical profession or merely a $120 testimonial made-to-order "by request." One is doubly suspicious, too, that the four-page article in the same publication on "The Internal Treatment of Gonorrhea" (with Gonosan), represents but $40 worth of "copy." This Gonosan testimonial was written by the renowned A. H. Ohmann-Dumesnil, A.M., M.E., M.D., Ph.D., etc., editor of the, now defunct, *St. Louis Medical and Surgical Journal* of unsavory reputation. Possibly, however, Lehn & Fink vary their schedule of rates for such testimonials according to the professional standing of the authors furnishing them.

TUBERCULOIDS TABLETS.

Another "Consumption Cure" and Its Fraudulent Claims.

CHICAGO, Jan. 14, 1908.

To the Editor:—The card, of which the following is a copy, is so evidently exploiting a fraud that the fact should be made known to the profession:

PHTHISIS PULMONALIS CURABLE.

By the Germicidal, Antiseptic (non-irritating), Alterative, Reconstructive, and Restorative properties of TUBERCULOIDS TREATMENT for TUBERCULOSIS. The medicinal factor being TUBERCULOIDS TABLETS, a chemical production proven efficacious by bacteriological tests, substantiated by practical use by physicians under all kinds of climatic and systemic conditions. Full size package ($1.50 size, 200 tablets) furnished free to accredited practicing physicians on return of the attached card. Ample information furnished by personal letter for intelligent administration. Originated and manufactured only by COLUMBUS PHARMACAL COMPANY, COLUMBUS, OHIO. Serial No. 3219, Guaranteed under the Food and Drugs Act, June 30, 1906,

All who are in touch with the literature of tuberculosis pulmonalis know that there is no "germicidal antiseptic or

1. Purgen is the trade name for the aperient drug phenolphthalein. In Europe this product seems to be advertised in street-cars, omnibuses and even on hotel toilet paper. (See THE JOURNAL, Nov. 2, 1907, 1541.) Extravagant claims are made for it, and while phenolphthalein may be bought for 40 cents an ounce. Purgen is quoted wholesale at $3.20 an ounce in tablet form. For further information see THE JOURNAL, Sept. 14, 1907, 954.

alterative," etc., cure for the disease; the people and the profession should be protected from such impositions by full information. Can you not tell us what is in tuberculoids tablets and once more make plain what "guaranteed under the Food and Drugs Act" means?

I regret to think that physicians will use the attached returnable postcard by which samples of the drug may be obtained, for it means that they are willing to use drugs, the composition of which they do not know, and for the therapeutic action of which they must rely on statements of the manufacturer.

I appeal to you because of the good work which THE JOURNAL has done and is doing in showing up the uselessness and often harmfulness of the majority of proprietary remedies.

N. S. DAVIS.

COMMENT: Some of the circulars advertising Tuberculoids, and also specimens of the product, were submitted to the chemical laboratory of the American Medical Association for an opinion and a report. The chemists report as follows:

> The statements regarding the chemical composition of Tuberculoids are typical of those made for "patent medicines." While pretending to give exact information regarding the composition of the remedy, the literature contains only mystifying phrases. Thus in one circular we read:
>
> > Starting with guaiacol, cinnamic acid and compounds of potassium, bismuth and iodin, careful research indicates that the following formulæ represent the final chemical compounds: $KC_9H_7O_2$, $C_6H_4OCH_3OBiO(H_2O)x$.
>
> In another circular we read:
>
> > Starting with guaiacol, cinnamic acid and compounds of potassium, bismuth and iodin, careful research indicates that the following formulæ represent the final chemical compounds: $C_{17}H_{21}NO_4$. $KC_9H_7O_2$, $BiC_7H_{16}O_6I$.
>
> Thus, starting with the same chemical substances, the final chemical compounds are not always the same! The second formula names a compound having the composition $C_{17}H_{21}NO_4$; this is not contained in the first formula. Again, while in the second formula a bismuth compound is given which contains iodin, the bismuth compound in the first formula does not contain this element.
>
> The purpose of the formula is evidently to mislead. In view of this and the ridiculous and unwarranted statements made regarding the therapeutic action of this product, it has not been deemed of sufficient importance to submit the nostrum to an extended analysis. Qualitative examinations have determined the presence of bismuth, guaiacol and a substance which responded to tests for cinnamic acid. Apparently, therefore, these tablets contain bismuth, possibly a nitrate of bismuth, a compound of guaiacol and a salt of cinnamic acid.

It has long been realized that the drug treatment of tuberculosis is secondary to hygienic treatment, and no intelligent physician who knows the actual pathologic condition is expecting a specific for the disease. Guaiacol, arsenic and some other drugs may have a place in the therapy, but not by any means as curative agents.

There is no class of patients whom the nostrum maker can influence so easily as consumptives; they are always hopeful and ever ready to praise any remedy they happen to use. This is undoubtedly the reason why the "consumption cure" promoters succed in getting so many testimonials.

As to the significance of the statement, "guaranteed under the Food and Drugs Act," the Secretary of Agriculture says: "The statement does not mean that the United States Government guarantees the purity of the article or guarantees that it is what the label says it is. . . . On the contrary, the serial number is assigned to fix the responsibility where it belongs—on the manufacturer—and to protect innocent dealers." Any nostrum—no matter how fraudulent—may carry a government serial number, even though it does not comply with the Food and Drugs Act.

Mixed Skin Diseases.—Dr. L. Duncan Bulkley, in the *Therapeutic Gazette*, gives a reminder that a patient may have several entirely distinct diseases of the skin at the same time, one of which may mask the other and confuse the diagnosis.

Correspondence

Postgraduate Work in Mission Hospitals.

CHITTABALBIE, KOREA, Sept. 17, 1907.

To the Editor:—I ask you to make public to the more ambitious and better element of the student bodies the fine opportunities for experience in the hospitals in the Orient. I have been through many in Korea and China, and the plan I attempt to outline here is indorsed by all the physicians I have talked to. The greatest handicap that confronts the graduate is lack of experience; experience in any line develops skill and this is doubly true in medicine and surgery. It is for this reason that interneships are so zealously sought in our hospitals. But, unfortunately, these are not open to all who are qualified to enter them in such capacities. I recommend to the better element of our ambitious graduates, therefore, the great advantages and opportunities of spending some time in the hospitals in the Orient, which are for the most part missionary enterprises. These hospitals are in charge of overworked physicians, and many thousands of cases are seen annually. While the graduate would be qualifying to enter his profession, he would be incidentally assisting a most worthy cause. Of course, he would have to defray all his expenses, both traveling and living, but these would not exceed $1,000 a year. By corresponding either with me (enclosing stamp), with the mission boards or with the hospitals, instructions may be had. Of course, only those of good moral character would be acceptable.

J. W. NOLAN, M.D.

OPINIONS OF FOREIGN MISSIONARY BOARDS.

In view of the above suggestion, THE JOURNAL entered into correspondence with certain foreign missionary societies. Dr. James L. Barton, secretary of the American Board of Commissioners for Foreign Missions, wrote at length regarding the plan, and from his letter we quote the following:

"The condition which you outline in your letter certainly prevails in nearly all the mission hospitals of the board. The patients so press on the physician in charge that it is practically impossible for him, without putting his health in peril, to keep up with it. I believe in every case an earnest, able, Christian physician, recently graduated from a worthy American institution, would be welcomed as an assistant and an associate, and would be given every opportunity to study the diseases and cases coming before the missionary physician in charge, and he would also be given, without question, a large share in the work to be done. . . . You ask what requirements the board would probably demand. I am sure these would be simple, but I feel equally sure they would commend themselves to all who enter on this work. Whoever goes out in this way would from the moment he entered the hospital become fully identified with our mission and with the hospital, and the mission and this board would be held by the people as responsible for what he did, both within and without the hospital. . . . For this reason . . . we should wish whoever went in this way to have taken commendable rank throughout his medical course. Second: We should probably want him to obtain from some leading state in this country a diploma for practice in that state. This we require of all our medical missionaries. Third: We should want him to send us the names of at least six people who know him best, to whom we could write for testimonials as to his character, ability and Christian standing. Fourth: We should want evidence that the man is a member of an evangelical Christian church, and is thoroughly interested in Christian things, and especially in Christian missions abroad. . . . Perhaps I should add that in every appointment under our own board as a regular medical missionary, we require not only the medical course with the degree from a worthy medical institution, but we require from one to two years of postgraduate work, in addition to the diploma, from some leading state like New York, Massachusetts, Illinois or Ohio, where the state examinations are close and where the certificate means something. . . . Two thousand dollars ought to cover the necessary expenses for a period of two years, including passage out and back."

Mr. Arthur J. Brown, secretary of the Board of Foreign Missions of the Presbyterian Church in the U. S. A., cordially welcomed the plan suggested in Dr. Nolan's letter, but he conservatively adds:

"We feel that we ought to state frankly, however, that we fear that the opportunities would be less valuable to the young men than they might imagine. The conditions of missionary life are often trying. The hospitals, while usually having an immense medical and surgical practice, have an equipment that would be decidedly disappointing to a young man accustomed to the large and costly plants in the United States. The house accommodations might be inconvenient and the climate debilitating. Moreover, such a man would not know the language of his patients, and would therefore be wholly dependent on an interpreter for communicating with them."

THE NEED OF MEDICAL MISSIONARIES.

Dr. W. H. Forsyth, a medical missionary in Korea, writing of the need of regular medical missionaries (not assistants), says:

"The work is hard and the salary varies from $600 for single men to $1,200 or $1,500 for married missionaries. It is a wonderful opportunity to reach and relieve thousands of suffering people who are without help, to train natives to take up the practice of medicine and to win many to the Christian faith. It is a work that deserves the active interest and support of all Christian physicians."

He sends a list of medical missionaries needed by various boards. It does not claim to be a complete list, but we print it because of its connection with the subject under discussion.

AMERICAN BAPTIST UNION.

Three for various fields.—Rev. F. P. Haggard, Secretary, Ford Building, Boston.

BOARD OF FOREIGN MISSIONS OF EVANGELICAL LUTHERAN CHURCH.

One for Liberia, Africa.—Dr. Marion J. Kline, Secretary, 21 W. Saratoga Street, Baltimore.

GENERAL CONFERENCE OF FREE BAPTISTS.

One (married) for Bhimpore, India.—Mr. Harry S. Myers, Secretary, Hillsdale, Mich.

BOARD OF FOREIGN MISSIONS OF METHODIST EPISCOPAL CHURCH.

One for Good Samaritan Hospital, Guanajuato, Mexico; one (unmarried) for Foochow, China.—Dr. H. K. Carroll, Secretary, 150 Fifth Avenue, New York.

BOARD OF FOREIGN MISSIONS OF PRESBYTERIAN CHURCH IN U. S. A.

Two for Korea; two for China.—Dr. Stanley White, Secretary, 156 Fifth Avenue, New York.

BOARD OF HOME MISSIONS OF PRESBYTERIAN CHURCH IN U. S.

One for work among Navajo Indians.—Dr. Charles L. Thompson, Secretary, 156 Fifth Avenue, New York.

DOMESTIC AND FOREIGN MISSIONARY SOCIETY OF PROTESTANT EPISCOPAL CHURCH.

Three for Wusih, Wuchang and Shasi, China; one for Japan.—Mr. John W. Wood, Secretary, 281 Fourth Avenue, New York.

BOARD OF FOREIGN MISSIONS OF REFORMED CHURCH IN AMERICA.

One for Amoy, China. Dr. H. N. Cobb, Secretary, 25 East Twenty-second Street, New York.

BOARD OF FOREIGN MISSIONS OF REFORMED CHURCH IN U. S.

Two for China.—Dr. A. R. Bartholomew, Secretary, 1306 Arch Street, Philadelphia.

UNITED EVANGELICAL CHURCH MISSIONARY SOCIETY.

One for Hunan, China.—Rev. B. H. Niebel, Secretary, Harrisburg, Pa.

SUDAN UNITED MISSION.

One for the Sudan, West Central Africa.—Mr. Charles B. Kurtzhalz, Secretary, 329 East Walnut Lane, Germantown, Philadelphia. For missionary work in general, address the Student Volunteer Movement, 3 West Twenty-ninth Street, New York City.

MEDICAL MISSIONARY WORK IN CHINA.

Apropos of this subject, a letter received from Dr. Charles F. MacKenzie, at one time located at Nashville, Tenn., now at Kinhwa, China, where he is stationed as a medical missionary, is of interest. We quote:

"This is a great country for medical work. I am the only foreign physician among 300,000 people, there being no other nearer than 200 miles. The chances for a young man just out of medical school are great, and the experience he would gain here would be far ahead of any chances he would have at home. The great drawback is the language, of course. One has to have that before he can do much, as no Chinese speaks English where I am. The ordinary Chinese doctor knows nothing of surgery and very little medicine. Santonin is our mainstay, as about 85 per cent. of our Chinese patients are full of ascarides. Smallpox is considered a matter of course, about the same as we consider a child having measles. The people around us inoculate the children with smallpox scabs in the nostril, hence many children are blind from this practice.'

In this connection also we refer to an interesting and elaborately illustrated article in the December *World's Work*, which describes the work done in mission hospitals.

An Antivivisection Play, in Three Acts.

NEW YORK, Feb. 20, 1908.

To the Editor:—The scene of the first act is laid in Carnegie Lyceum, in New York City, where there was recently an enthusiastic gathering. Dinners, of which roasted or broiled meats (animals, by the way, almost invariably meet tragic deaths) were a part, were being comfortably digested; so that everybody was in a position to take an amiable interest in the proceedings. The great majority in this audience were women, who wore the plumes of slaughtered birds in their hats; and (it being evening) pet dogs, whose tails had been docked, and whose ears had been clipped, were reposing undisturbed at home. The lady president of the Antivivisection Society (in alliance with the International Antivaccination Union) spoke with the precision of statement so characteristic of the feminine mind. The great difficulty in getting started in this country, she declared, is because, "while no doubt 50 per cent. of the medical profession are to-day at heart opposed to vivisection, its leaders in New York, confident in their eminence and power to punish, have sent out a practical prohibition to all physicians that they should not approve or sustain in any manner any movement toward a restriction of vivisection." Several public-spirited gentlemen were on the platform. One among these, in terms conspicuous for man-like temperance of expression, stated that those medical experimenters who vivisected animals were "virtuosos of agony, in whom curiosity, vanity or scientific zeal has supplanted humanity, and to whom harmonies or discords of agony or long-drawn cadences of torture struck from quivering nerves are music." One clergyman contended that the practices condemned are continued for "the purposes of commercialism, to obtain antitoxins, which have not yet proved their efficacy, and in some instances have been known to have increased disease instead of decreasing it." Another maintained that vivisection is "contrary primarily to the law of God;" this clergyman would no doubt a generation ago have denounced the administration of chloroform to women in labor, on the basis of some scriptural expression. The Rockefeller Institute was especially stigmatized and "resoluted" against as being "the principal theater of vivisection operations in this part of the world to-day." A bill was read, which had been introduced in the legislature at Albany; and the assemblyman who was responsible for it naively observed that in passing it the state would incur no expense, for the Antivivisection Society and the Humane Society had offered to provide the salaries of the inspectors proposed in the bill.

The second act of this play takes place in the city of New Brunswick, N. J., where the two villains of the cast, by name Dr. H. H. Janeway and Dr. E. I. Cronk, have been laboring under the obsession that without animal experimentation medicine would be "but a savage art—not even the shadow of the present science of cure and prevention." Being desirous of perfecting an operative procedure for gastric cancer and tuberculosis, they have done tentative operations on animals; and have also, in a spirit equally unscientific and calloused, removed a lobe of one lung from a dog named Pete. The sufferings which a veracious lady of that city had alleged this dog was enduring have divided that generally peaceful and sane community into two camps. A somewhat Gilbertian warfare has resulted; most of the contestants, especially the feminine participants, "did not know what it was all about anyway." A superb strategic move was the arrest of Drs. Janeway and Cronk on charges of cruel usage of the dog Pete, made by the aforesaid tender-hearted lady; the miscreants happily regained freedom when bail of $300 for each was paid. Pete, because of whose agonies the arrests were made, was sought for in his usual comfortable bunk in Dr. Janeway's barn. But the martyr, who "for the sake of science, had given most of himself away," was absent; he (or what remained of him) was found near by, engaged, with

all his old-time zeal, in his favorite occupation of chasing the New Brunswick cat which he, in his turn, was trying to vivisect.

The third act takes place on a bleak bank of the East River, with the reprehended Rockefeller Institute providing the back scene. Several hours before dawn a venerable gentleman rang the bell at the entrance door of the building. But there was no one to respond to his ringing. He therefore sat down before the doorstep, or waited about it in most inclement weather, until daylight. Being then admitted, he made known his errand. He is connected with Berea College, where either a real or suspected case of epidemic cerebrospinal meningitis has developed; and he was most anxious to secure some of the serum which Dr. Flexner and his associates have, largely through animal experimentation, evolved both for curative and prophylactic purposes, against that dreadful disease. At first it was thought to refuse his request, for the reason that the work on this serum is still in the experimental stage. Finally, however, on his assurance that it would be given only by skilled physicians, who would be responsible for its proper use, several vials of this serum were entrusted to him; and they were at once rushed off to Kentucky, in the hope that they would reach their destination within twenty-four hours. All men and women of really humanitarian instincts may reasonably entertain the belief that in this circumstance valuable human lives have thus been saved, and that much of the ghastliest sufferings in all medical experience has thus been averted.

The reader must decide for himself if this play has been a farce, a comedy, a drama or a tragedy. B.

Winter Cholera.

ESCANABA, MICH., Feb. 18, 1908.

To the Editor:—Your editorial on "Winter Cholera" in THE JOURNAL, February 15, leads me to say just a few words on that form of bowel trouble. Many cities will undoubtedly proclaim priority to Lansing, and it may be well to state that many widespread epidemics have been recorded in southern Michigan as far back as 1880. These were given consideration and discussed by the health authorities in Michigan in 1881. The Indiana State Board of Health also called attention, in their report of 1901-1902, to an epidemic on winter cholera at Michigan City. The report reads, in part, as follows: "December 27 information was received by telephone from Michigan City that a severe epidemic of winter cholera existed at that place. My informant, Dr. Tilotson, said he believed the outbreak was due to sewage that had been introduced in the water supply. He explained that there were two intakes in the water-works, one reaching about half a mile out into the lake and another a few hundred feet, opening into the creek. The latter intake was put in as a precaution against fire, because it was known that lake intakes sometimes freeze up. In the event of the freezing of the long intake, then, water could be pumped into the creek. On December 21, without any warning, the engineer at the water-works turned in the water from the creek, and within twenty-four hours hundreds of people were prostrated with severe diarrhea, attended with pain, and having many of the minor symptoms which reminded one of cholera. It was for this reason that the disease was called winter cholera."

Escanaba for a number of years has experienced winter epidemics of gastrointestinal disturbances, similar to those cited above. In fact, winter cholera, as it is here, is a household word. This vague nomenclature has been adapted to an intestinal flux, occurring during the winter months, and characterized by a most varied symptomology. Because of much mysticism that has held sway in this community on such disturbances, and because of an authorized high mortality, I was prompted, in the early months of 1903, to conduct an investigation as to the causal factors back of these troubles. Such observations on winter cholera have been briefly stated in a paper read before the Upper Peninsular and Fox River Valley medical societies at Menominee, July 16, 1907. This paper was published in the *Journal of the Michigan State Medical Society*, November, 1907, and was abstracted in THE JOURNAL, Jan. 11, 1908, page 152.

I have been prompted to make these remarks because of the fact that I am not aware of a detailed study of any epidemic of winter cholera that has in any way established the relationship of this term to any positive gastrointestinal pathology. I believe that my efforts have been the first that have been put forth in this direction. I am at the present time engaged in further work along this line, and hope to be able to make a final report of my observations at Chicago this summer.

O. C. BREITENBACH.

Tuberculin for the Ocular Reaction.

DETROIT, Feb. 15, 1908.

To the Editor:—In THE JOURNAL, Jan. 25, 1908, page 260, there appears in the text, with a footnote reference, statements relative to the nature and process of manufacture of purified tuberculin for the ocular reaction. The statements attributed to me were made to one of the authors of the article over the long-distance telephone, the result being that they are not entirely correct, and at the author's suggestion I desire to offer the following correction which embodies the process as finally adopted for the manufacture of the material:

A well-grown culture of human tubercle bacilli on 5 per cent. glycerin bouillon is concentrated over a water-bath at about 80 degrees C. to one-tenth its volume. The concentrated culture is filtered to remove the germ bodies. This filtrate constitutes the so-called old tuberculin of Koch. To a given volume of this old tuberculin is added from two to five volumes of 94 per cent. alcohol, which throws down a voluminous, sticky precipitate. The alcohol is decanted, and the precipitate redissolved in distilled water and filtered through porcelain to remove any insoluble particles that may have been left in the precipitate. The filtrate, containing precipitate in solution, is then precipitated a second time with 94 per cent. alcohol, the alcohol removed, the precipitate washed with absolute alcohol and ether, and dried quickly in vacuo. The residue is then powdered under aseptic conditions, and manufactured into tablets.

The sample referred to in the paper was a portion of a small experimental lot, and inadvertently contained a few broken-down, dead bacilli, but the reaction does not depend on these, as the results obtained from a product which did not contain the germs have been found to be equally satisfactory.

E. M. HOUGHTON.

Miscellany

Dietetic Treatment Before and After Operations on the Stomach.—C. Wegele contributed an article on this subject to the *Zeitschr. f. phys. u. diät. Therapie*, April, 1907, in which he asserted that much of the benefit of surgical operations on the stomach is annulled by unsuitable eating afterward, not only at first but in the months and years later. He ascribes the comparatively frequent development of cancer later to the lack of dietetic restrictions. The tardy disturbances are most liable in cases in which the operation had been undertaken on account of dilatation of the stomach from atony, especially when accompanied by gastroptosis and neurasthenia. If the diet of such patients is regulated for weeks and months after the operation they are able to escape the dyspeptic disturbances almost inevitable otherwise. The development of peptic ulcer should be prevented by combating hyperacidity and hypersecretion by restricting the diet to milk, fats, white meat and purées, refraining from coffee, bouillon, spices, alcohol, cabbage and nuts. Bismuth, alkalies or Carlsbad water should be given to prevent injury of the intestinal mucosa from the acid chyme. He has succeeded in curing by lavage of the stomach and dietetic measures alone two patients suffering from reflux of bile in a very severe vicious circle. His experience indicates that adhesions are less liable to develop, the smaller the surgical wound. In case of achylia, an acid before meals and pancreatic extract afterward will aid digestion, restricting the food to chopped meat, light puddings, acorn coffee and a decoc-

tion of huckleberries. Opium should be given only in very small doses or in a suppository. Constipation is seldom observed after a gastroenterostomy, but if it occurs it should be combated with stewed prunes, whole wheat bread, buttermilk, cream and sugar of milk, with mild laxatives as needed and oil enemas. Patients should be impressed beforehand with the fact that the operation is not the last resort in treatment of their chronic stomach trouble, but quite the contrary. It aims to lay the foundation on which rational dietetic treatment will lead to a permanent cure.

Electric Treatment of Aneurisms of Aorta.—Brazilian Method.—A. de Freitas states in the *Brazil Medico*, Nov. 22, 1907, that aneurism of the aorta seems to be on the increase in Brazil. Syphilis, alcoholism and the food seem to be the principal causes, especially an excess of meat and adulterations in articles of food. He reports 31.8 per cent. cured, 50 per cent. materially improved, and only 18.1 per cent. mortality in an experience with 22 cases during the last five years, all treated with what he calls "positive cutaneous voltaization" or the "Brazilian method." This has a marked local action on the lesion, modifying local conditions and relieving the symptoms. The value of this method lies in the properties of the anode. The anode has a retracting action on the walls of the dilated vessel, and a coagulating action on the fibrin of the blood, as well as an action on the vasomotors, improving the nourishment of the parts. This same coagulating action of the anode has proved useful in treatment of hemorrhage from uterine fibromas and hemorrhagic metritis, utilizing the electrolytic introduction of metallic ions into the tissues. It has also proved effectual in inducing the production of a retractile eschar in treatment of angiomas and vascular nævi. The mechanism of the cure is the same in all these processes, except that it is more intense in the aneurism. The passage of the current causes an inflammatory reaction which induces a deposit of fibrin after the primary irritative coagulation has ceased. This phenomenon can be readily recognized by the subsidence of the tumor. As the aorta decreases in size the symptoms resulting from compression of other organs subside with it. He has found ionization with iodin or zinc an excellent aid in the treatment, as also auto-conduction or D'Arsonvalization. His later experience has amply confirmed his first favorable results from the use of a current of relatively large quantity under medium or feeble tension—voltaization, as described in THE JOURNAL, Nov. 21, 1903, page 1310. He finds aneurism of syphilitic or alcoholic origin the hardest to cure.

Plea for Scientific Cooperation Between Physicians to Follow Up Cases.—I. Boas of Berlin has been preaching the urgent necessity for some arrangement between physicians which would make it possible to keep track of the course of the more interesting chronic affections as the patients wander from place to place and consult one medical man after another. The often constant change of physicians causes the case to be lost to science with all its obvious lessons in regard to the course of the affection, the clearing up of diagnostic problems, the success of various therapeutic measures and the autopsy findings. The value of a case to science is comparatively insignificant now on account of the gaps in our knowledge concerning it. He pleads for a more exalted ethical appreciation of the single case. Not only the patient himself but the physician and entire suffering humanity have an interest in knowing the course of the affection, the results of treatment and the outcome. The physician should not regard the patient as "my case," but as belonging to the totality of physicians, to the profession at large. Patients should be instructed to report later to the physician or reply to letters of inquiry. Still more important is the cooperation of physicians. They should make a point of replying to an inquiring physician with careful and minute information. A printed form might be useful for the purpose, with blanks for diagnosis, course, duration, treatment used, its results, outcome, and eventual operative and autopsy findings. Boas did not propose any means of setting the desired mechanism to work, but merely that a committee should be organized to discuss ways and means to bring the entire medical world thus into closer touch. His talk on the subject is reproduced in the Berlin letter in the *Münch. med. Wochenschrift*, November 12.

Discuss Sanitary Themes.—The Proceedings of the Seventh Annual Conference of Sanitary Officers of the State of New York, held in Buffalo, Oct. 16 to 18, 1907, form an interesting volume containing much useful material. The presidential address of Dr. Porter has already (THE JOURNAL, Nov. 16, 1907, p. 1715) been abstracted. Other papers were: "The Dissemination and Control of Tuberculosis as Illustrated in the Bovine Species," by Veranus A. Moore, M.D.; "The Early Diagnosis and Treatment of Pulmonary Tuberculosis," by John H. Pryor, M.D.; "The Duty of the State in the Prevention of Tuberculosis," by Edward Devine, M.D.; "Labor Legislation in Its Relation to Public Health," by Adna F. Weaver, Ph.D.; "Sewage Disposal for Institutions in Small Communities," by Theodore Horton, C.E.; "The Laws Relating to the Pollution of Streams," by A. H. Seaman, Esq.; "Sanitary Inspection of Wells and Their Surrounding," by L. M. Wachter; "Practical Points on Quarantine," by John T. Wheeler, M.D.; "The Detection of Communicable Diseases in Schools as a Part of Medical School Inspection," by H. D. Schmidt, M.D.; "The Prevalence of Physical Defects in School Children," by Harlan P. Cole, M.D.; "The Detection of Defects of the Eye, Ear, Nose and Throat," by H. C. Schenck, M.D.; and finally, a symposium on "What Health Departments Can Do to Secure Pure Milk," in which Dr. Thomas Darlington urged the inspection of dairies and farms; Dr. Ernest Wende championed the permit and license system; Dr. Henry R. Hopkins spoke of the "Tell Tale Milk Register;" Dr. George W. Goler advocated educational methods; and Dr. Ellis M. Santee described the advantages attending the use of the Score Card System. The papers are all eminently readable and well-marshaled presentments of their respective subjects.

Treatment of Sciatica by Perineural Injections.—A. Bum of Vienna announces in the *Wien. Med. Presse*, Nov. 17, 1907, that he has found local injection of a fluid extremely effectual in the cure of chronic peripheral sciatica. He has occasion to treat from fifty to sixty patients with sciatica every year, and since 1904 has been systematically applying these perineural injections. He ascribes the benefit to the mechanical distension of the parts, and thinks it is important to inject the fluid in a constant stream and under considerable pressure. Physiologic salt solution is injected through a needle cannula from 7 to 8 cm. long, inserted at the point of the inner aspect of the thigh where the long head of the biceps femoris is crossed by the gluteus maximus. The patient must be in the knee-elbow position; the cannula is introduced for half its length, and is then lowered a little and pushed in for 3 or 3.5 cm. farther. This brings the tip to the sciatic nerve at the point where it is most easily and safely reached without fear of injury of the soft parts, as he learned from experiments with colored fluids on the cadaver. The injected fluid enters the perineurilemma. When the needle reaches the sciatic nerve the leg twitches or there is sharp pain or paresthesia in leg and foot. The tube connected with the syringe holding just 100 c.c., is attached to the cannula and the fluid is injected. The patient lies down for a half hour or so, and then goes home and rests for the next day or two. In a few cases the neuralgia recurs, requiring from two to four injections before the patient is entirely cured. In 62.6 per cent. of 67 cases, the cure was complete; in 20.8 per cent. there was marked improvement, and in 8.9 per cent. no effect was apparent.

The Fissure Pain in the Chest.—Sabourin calls attention to painful points corresponding to the fissures between the lobes of the lungs, and describes a number of cases to show their diagnostic value. His first article on the subject appeared in the *Revue de Méd.* for April, 1907, and later experience has confirmed his assertions. The most frequent painful point of the kind is near the spine, close to the third and fourth ribs, accompanying tuberculous pleuro-pulmonary lesions at the edge of the large fissure separating the upper and lower lobes of the lung. Another point is back of the axilla, at the head of the small horizontal fissure, but a lesion anywhere over the entire surface of the fissures may be the cause of a

painful point or strip above. An "aberrant" painful point sometimes occurs at the anterior extremity of the sixth or fourth rib. The pain is not neuralgic in character, but is a dull ache with acute pain during coughing or exertion of any kind. These fissure pains may be observed in cases of bronchial embolism close to the fissure, in interlobar pleurisy with effusion, in case of apoplexy of the walls of the middle lobe, in fissural pneumothorax and in pleurisy without effusion. The fissure pains seem to be the external manifestation of the morbid activity of the interlobar pleura. In many cases of pleurisy without effusion, in which the physical signs are minimal, the fissure pain alone will differentiate the affection and confirm the diagnosis by inviting closer examination. He describes a number of typical cases to illustrate his remarks.

Treatment of Neuralgias.—In an address on the therapeutics of neuralgia, delivered by Schultze at the last German Congress for Internal Medicine, he stated that he had frequently found hot sand baths effectual in the treatment of sciatica. Bloodless stretching of the nerve frequently cures neuralgia, but he warns that too severe measures are liable to induce paralysis. He has noted the disappearance of the knee jerk after moderate stretching of the crural nerve. In the early stages of sciatica he finds rest the best treatment. The correct principle of stretching and working the nerve is to commence it only after the first phase, when the pain begins to subside somewhat after prolonged repose, or the pain can be artificially arrested. Injection of alcohol or other substances directly on the nerve causes a kind of medicinal resection of the nerve, but it may entail severe degeneration. It should be used with caution for all nerves not exclusively sensory. Many clinicians have reported brilliant results from these perineural injections. Some used small amounts of solutions of carbolic acid, antipyrin, cocain, eucain, etc., or merely air or water. Alexander injects Schleich's solution, and stretches the nerve under its influence. In case the nerve is resected, Schultze advises to plug the foramen with some permanent filling. Dry heat and hot baths are still as ever the main reliance in neuralgia, he said, and intelligently applied may cure without surgical interference.

Warning Precursor of Hemorrhage or Perforation in Typhoid Fever, Etc.—H. Huchard and Amblard refer to the periods of arterial hypertension observed in typhoid fever and other intestinal affections. The hypertension may lead to hemorrhage, to perforation, or merely entail an aggravation of the general condition. In any event, it is important that it should be recognized and treated early, and thus avert the menacing complications. The hypertension is only relative, the arterial tension being low in typhoid fever. The sphygmomanometer shows a sudden increase from 7 or 8 to 12 or 14 degrees and this warns of impending trouble. They cite four cases in which this sign, in an apparently mild typhoid fever, was followed a few hours later by fatal hemorrhage and perforation. The pulse grows slower as the arterial pressure rises, and the heart action shows the effect. Either the general condition grows rapidly worse or hemorrhage or perforation occurs, after which the arterial pressure falls and the pulse becomes weak and thready. The systolic effort, encountering unusual resistance in the periphery, drags and seems to make two attempts, causing a mesosystolic pulse gallop sound. They discuss the probable origin of the disturbance, and remark that something of the kind probably precedes hemoptysis in the tuberculous. Their communication on the subject was published in the *Revue de Méd.*, July, 1907

Criminality and Immigration in Cuba.—Dr. Fernando Ortiz, Havana, discusses in the *Archivos de Psiquiatria, Criminologia y Ciencias Afines*, of Buenos Aires, the question of immigration as related to criminality in Cuba, where the subject seems to be one of some importance. The population of Cuba, as is well known, is mixed and somewhat more so of late years owing to the importation of Asiatics. The phenomenon observed in this country that the immigrants furnish more than their share of criminals has been observed also in that island. In 1866, the latest year for which complete statistics are available, there was one native Cuban convict to every 1,072 native Cubans; one for every 373 Spaniards, and one for every 322 Asiatics. The proportions of criminality in every immigrant race are greater than in their home countries. Dr. Ortiz sees at least a partial remedy or prophylactic of the influx of foreign-born criminality in a multiplication of sources of immigration, that is to say, it is better to have 10,000 immigrants each from a number of countries than 100,000 from one. He would have a general registration of immigrants with a regular system of identification, preferably the thumb-print method rather than the elaborate and fallible Bertillon system.

Medicine's Earnings.—Medical science makes temperately a claim on the gratitude of the race. In London, New York and Chicago, the profession announces that recent progress in the cure and prevention of disease has gone far enough to diminish distinctly the incomes of practicing physicians. If this be true, it is a magnificent message of service to humanity. Without asking for further proof it may be accepted as true. Sanitation, the conquest of infant diseases, the lowering of typhoid percentages, aseptic surgery, the acquaintance with food values, the development of scientific nursing and the control of germ enemies are achievements known to everybody. Medical practice has simplified itself at its own pecuniary cost, while it has never faltered in promoting the investigations which result in the diminution of its earnings. To medical science and practice we can bow with respect and gratefulness. Their labor has been incessant, their intelligence lavishly applied, and the collective reward is a reduction of income. Their title to the name benefactors should at least have hearty recognition.—*Philadelphia Press.*

Effects of Dust on the Human Organism.—H. Brooks, in the *Dietetic and Hygienic Gazette*, December, 1907, states that dust in itself is productive of serious disease conditions, particularly of the respiratory and digestive tracts. These primary conditions predispose to secondary lesions, particularly pulmonary and lymphatic tuberculosis. Many contagious and infectious diseases are transmitted through the agency of dust. In a city the size of New York the production of large quantities of dust, often of a highly dangerous character, can not be prevented. In most instances dust can be relatively and economically collected and disposed of, and the production of unnecessary dust can and should be prevented by properly framed and enforced regulations.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

LITERATURE ON HEADACHE.

To the Editor:—In what issues of THE JOURNAL have articles been published on headache, its diagnosis, significance, treatment, etc.? GEO. C. BICKNELL, M.D.

The following is a list of articles and abstracts on headache that have been published in THE JOURNAL since 1901:

Sinkler, W.: Headache from Ovarian Disease (abstr. from System of Pract. Ther.), June 8, 1901, p. 1658.

Headache from Ocular Defects. (Editorial), March 15, 1902, p. 713.

Leszynsky, W. M.: Headaches (abstr. from *Med. Record*, Jan. 3, 1903), Jan. 17, 1903, p. 17.

Zimmerman, M. W.: Ocular Headaches (abstr. from *N. Y. Med. Jour.*, Nov 28, 1903), Dec. 12, 1903, p. 1496.

Robertson, C. M.: Headache from Non-Suppurative Inflammation of Nasal Sinuses, March 5, 1904, p. 645.

Wilkinson, O.: Headaches and Disease of the Nose (abstr. from *N. Y. Med. Jour.*, Oct. 1, 1904), Oct. 15, 1904, p. 1171.

Carstens, J. H.: Headache (abstr. from *Physician and Surgeon*, April, 1904), July 2, 1904, p. 80.

Norstrom, G.: Chronic Headache and Its Treatment by Massage (abstr. from *N. Y. Med. Jour.*, Nov. 4, 1905), Nov. 18, 1905, p. 1606.

Whitehead: Nasal Headache (abstr. from *Brit. Med. Jour.*, Jan. 28, 1905), Feb. 25, 1905, p. 662.

Reber, W.: Ocular Headache, April 15, 1905, p. 1221.
Drein, W. C.: Headache, April 15, 1905, p. 1220.
Ross: Calcium Salts in Headache (abstr. from *Lancet*, Jan. 20, 1906), Feb. 17, 1906, p. 544.
Saundby: Headaches of Renal Origin (abstr. from *Practitioner*, July, 1906), Aug. 11, 1906, p. 463.
Hammond, P.: Headache with Aural Disease, Nov. 10, 1906, p. 1523.
Walton, G. L.: Constitutional Headache, Nov. 10, 1906, p. 1524.
Davenport, F. H.: Headache with Pelvic Disease, Nov. 10, 1906, p. 1525.
Gould, G. M.: Headache and Eyestrain, Nov. 10, 1906, p. 1531.
Williams: Headache (abstr, from *Clinical Jour.*), Feb. 23, 1907, p. 729.
Thoms, S. W. S.: Relation of Headache to Eyestrain, March 23, 1907, p. 1009.

LITERATURE ON PSYCHOTHERAPY.

———ILL., Feb. 10, 1908.

To the Editor:—Please give a list of some of the books held in esteem by the medical profession, on the subject variously known as "suggestive therapeutics," "psychological medicine," "applied hypnotism," etc. This subject has apparently been so monopolized by the charlatans and impostors, until recent times, that any one interested in the subject to-day is at a loss to choose between the trash and the worthy contributions. A. C. P.

ANSWER.—The following, being more or less text-books of psychotherapy are standard works on the subject.

Tuckey: "Psychotherapeutics," G. P. Putnam's Sons, 29 West Twenty-third St., New York, $3.00.
Milne Bramwell: "Hypnotism, Its History and Practice," Alex. Moring, London.
Dercum: "Rest, Suggestion, Mental Therapeutics," a volume of S. S. Cohen's "System of Physiologic Therapeutics," P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.
Quackenbos: "Hypnotic Therapeutics," Harper Bros., Franklin Square, New York, $2.
DuBois: "Psychic Treatment of Nervous Disorders," Funk & Wagnalls Co., 44 East Twenty-third St., New York, $3.00.
Forel: Hypnotism, or Suggestion and Psychotherapy, Trans. by H. W. Armit, Rebman Co., 1123 Broadway, New York.

The following works also are of value, as bearing on the principles involved:

Sidis: "Psychology of Suggestion, a Research into the Subconscious Nature of Man and Society," D. Appleton & Co., 436 Fifth Ave., New York.
Schofield: "Force of Mind, or the Mental Factor in Medicine," Blakiston's, $2.00.
Schofield: "The Unconscious Mind," Funk and Wagnalls, $2.
Schofield: "Unconscious Therapeutics," Blakiston's, $1.50.
Monro: "Handbook of Suggestive Therapeutics, Applied Hypnotism and Psychic Science," Mosby Medical Book Co., 2313 Washington Ave., St. Louis, $3.

Before engaging in the practical study of the subject, a perusal of Schofield's "Force of Mind" will be found an excellent preparation.

BOOKS ON PRACTICAL DIAGNOSIS AND TREATMENT.

PISGAH, MD., ———.

To the Editor:—What books can you recommend as practical guides for clinical diagnosis and treatment?

GEO. C. BICKNELL, M.D.

ANSWER.—1. Forchheimer: "Prophylaxis and Treatment of Internal Diseases," D. Appleton & Co., 436 Fifth avenue, New York, $5.00. This is an excellent work in regard to treatment, combining comprehensiveness and detail in an unusual degree.

2. Fenwick, Samuel: "Medical Diagnosis," J. & A. Churchill, London, price about $1.75. This book was devised for the use of senior students at the bedside. It takes the most prominent feature and, by differentiating phenomena, classifies the conditions in which that might occur into groups. It then excludes all groups but one, and finally all members of that group but one, thus arriving at the diagnosis. It will for all time be a first-class work in regard to a large part of internal medicine, but unless there is a recent edition it will be somewhat out of date in regard to the more recent advances in certain diseases, particularly those dependent on micro-organisms.

3. A companion hand-book on medical treatment by the same author in the same series. The same remark about recent edition applies here, but the author's admirable method will still keep the book in the forefront of valuable works owing to the remarkable systematization that characterizes it.

4. Cailie: "Differential Diagnosis and Treatment," Appleton, $6.00.

5. v. Jaksch: "Clinical Diagnosis," J. B. Lippincott Co., Washington Square, Philadelphia, $7.50.

VEGETABLE FARMING BY CONSUMPTIVES.

———, ARK., Feb. 11, 1908.

To the Editor:—Would there be any danger to the consumers of vegetables produced by consumptive labor in a colony hygienically conducted. It is intended to cultivate a large tract of land, using such patients as would be able to do the labor, thereby affording necessary outdoor exercise and at the same time enabling the worthy needy to help defray the cost of board and treatment. In this way it is believed that a great deal of good could be done and the undertaking made lucrative to the stockholders.

Respectfully, J. P. B.

ANSWER.—The emphasis now being laid by experimenters on the possibilities of alimentary tract infection in tuberculosis points to the need of great caution in employing consumptive patients for handling or preparing articles of food. Under ordinary conditions, the hands of tuberculous patients must not infrequently become soiled with tubercle bacilli and the danger in handling fruits, berries or vegetables that are eaten uncooked can not be ignored. Furthermore, it is by no means true that tubercle bacilli in large masses of sputum will be quickly destroyed by external agencies. In fact, there is reason to believe that they might survive for a long time in soil. In any event, there would probably be a prejudice more or less well-founded against articles of food known to have been handled by consumptive patients. Again, the question of exercise is one that should be determined with absolute regard to the welfare of the individual patient. The trend of opinion in the treatment of tuberculosis is distinctly toward rest rather than exercise for many patients, and it may be questioned whether the interests of patients in general would be conserved by measures that would make their labor "lucrative to the stockholders."

TAMARAC.

BELT, MONTANA, Feb. 17, 1908.

To the Editor:—Please give the botanical name of tamarac, the preparations derived from it, their properties, uses, and doses.

C. R.

ANSWER.—Tamarac is the common name of *Larix americana*, the American larch, of the natural order of *Coniferæ*. This is the *Pinus pendula*, *Pinus microcarpa*, and *Abies americana* of various botanists and is known by the several names of black larch, American larch, hackmetack, etc. It is not mentioned in the "National Dispensatory," the "United States Dispensatory," or standard works on materia medica. According to "King's American Dispensatory," an eclectic publication, a decoction of the bark is said to be laxative, tonic, diuretic, and alterative, and is recommended in obstructions of the liver, rheumatism, jaundice, and some cutaneous diseases. A decoction of the leaves has been employed in hemorrhoids, hemoptysis, menorrhagia, diarrhea, and dysentery, and externally in cutaneous diseases, ulcers, burns, etc. In dropsy, combined with spearmint, juniper berries, and horseradish, it has proved valuable. The dose of the decoction is from two to four fluid ounces from two to four times a day.

PASTEUR INSTITUTIONS IN THE UNITED STATES.

The Pasteur Institute of Paris is asking for a list of the Pasteur institutes for the treatment of rabies in the United States and Canada, with their location and names of officers. Will such institutions write us, giving a list of their officers, directors, etc?

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 22, 1908:

Feed, G. P., asst.-surgeon, will proceed on or before the expiration of his present leave of absence to Fort Ontario, New York, for duty.

Flagg, C. E. B., asst.-surgeon, resignation as an officer of the Army, has been accepted by the President, to take effect April 15, 1908.

Dale, F. A., asst.-surgeon, ordered to Fort Lincoln, N. D., for duty.

McAndrew, P. H., asst.-surgeon, ordered to Fort Slocum, N. Y., for duty.

Hanner, J. W., asst.-surgeon, granted leave of absence for two months and seven days, from Feb. 19, 1908.

Siler, J. F., asst.-surgeon, will proceed on or before expiration of present leave of absence, to Fort Des Moines, Iowa, for duty.

Craig, C. F., asst.-surgeon, advanced to rank of captain, to date from Feb. 18, 1908.

Gray, W. W., deputy surgeon general, granted leave of absence for one month.

Lowe, T. S., contract surgeon, relieved from duty in the Philippines Division, and ordered to San Francisco, for further orders.

Wells, F. M., contract surgeon, returned from temporary duty at Fort D. A. Russell, Wyo., to his proper station, Fort Robinson, Neb.

Bastian, J. E., contract surgeon, arrived at Fort D. A. Russell, Wyo., for duty.

Smith, W. H., contract surgeon, relieved from further duty at Fort Leavenworth, Kan., and assigned to permanent duty at Fort Moultrie, S. C.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy for the week ending Feb. 22, 1908:

Kennedy, J. T., surgeon, detached from duty with Naval Recruiting Party No. 3, February 29, and ordered to the Naval Recruiting Station, Dallas, Texas, March 2.

Richards, T. W., surgeon, ordered to the *Colorado*, February 22, when discharged from treatment at the Naval Medical School Hospital, Washington, D. C.

Wilson, G. B., surgeon, detached from the *Colorado* and ordered to the *Wabash*.

Heiner, R. G., P. A. surgeon, detached from the *Wasp* when placed out of commission and ordered to the *Pennsylvania*.

Baker, M. W., P. A. surgeon, unexpired portion of sick leave revoked; ordered to the Naval Hospital, New York.

Belknap, J. L., asst.-surgeon, detached from the *Wabash* and ordered to the Naval Training Station, Newport, R. I.

Schaller, W. F., asst.-surgeon, detached from the *Pennsylvania* and ordered to the *Relief*.

Taylor, E. C., P. A. surgeon, detached from the Naval Hospital, New Fort Lyon, Colo., and resignation accepted.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Feb. 19, 1908:

Bahrenburg, L. P. H., P. A. surgeon, granted leave of absence for 21 days from Feb. 23, 1908.

McCoy, G. W., P. A. surgeon, granted leave of absence for 1 month and 21 days from Nov. 28, 1907, on account of sickness.

Friedman, H. M., acting asst.-surgeon, granted leave of absence for 1 day on account of sickness, Feb. 10, 1908.

Keatley, H. W., acting asst.-surgeon, granted leave of absence for 8 days from Feb. 18, 1908.

Parker, T. F., acting asst.-surgeon, granted leave of absence for 2 days from March 4, 1908.

Stanton, J. G., acting asst.-surgeon, granted leave of absence for 21 days from Feb. 14, 1908.

Tappan, J. W., acting asst.-surgeon, directed to proceed to Douglas, Ariz., for special temporary duty, on completion of which to rejoin his station at El Paso, Texas.

BOARD CONVENED.

A board of medical officers was convened to meet at San Francisco, Feb. 21, 1906, for the purpose of making a physical examination of an officer of the Revenue-Cutter Service. Detail for the board: Surgeon H. W. Austin, chairman, and P. A. Surgeon C. H. Gardner, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Feb. 21, 1908:

SMALLPOX—UNITED STATES.

Alabama: Mobile, Jan. 25-Feb. 1, 10 cases.
California: Los Angeles, Jan. 25-Feb. 1, 5 cases; San Francisco, Jan. 25-Feb. 1, 10 cases.
District of Columbia: Washington, Feb. 1-8, 13 cases.
Illinois: Chicago, Feb. 1-8, 3 cases; Springfield, Jan. 1-Feb. 6, 10 cases.
Indiana: Indianapolis: Feb. 3-9, 5 cases; South Bend, Feb. 1-8, 1 case.
Iowa: Sioux City, Feb. 1-8, 8 cases.
Kansas: Kansas City, Jan. 25-Feb. 8, 3 cases; Topeka, Jan. 25-Feb. 1, 2 cases.
Kentucky: Lexington, Feb. 1-8, 6 cases.
Louisiana: New Orleans, Feb. 1-8, 5 cases (imported).
Massachusetts: Fall River, Feb. 1-8, 1 death.
Minnesota: Winona, Jan. 28-Feb. 8, 2 cases.
Mississippi: Greenville, Dec. 28-Jan. 18, 3 cases.
Missouri: Hannibal, Feb. 3-10, 2 cases; St. Joseph, Dec. 28-Feb. 8, 32 cases; St. Louis, 6 cases.
Montana: Butte, Jan. 28-Feb. 4, 1 case.
New York: New York, Jan. 25-Feb. 8, 4 cases.
Ohio: Cincinnati, Jan. 31-Feb. 7, 5 cases.
Tennessee: Knoxville, Feb. 1-8, 2 cases; Nashville, 18 cases.
Texas: Galveston, Jan. 31-Feb. 7, 3 cases.
Virginia: Richmond, Jan. 25-Feb. 1, 1 case.
Washington: Spokane, Jan. 25-Feb. 1, 7 cases.
Wisconsin: La Crosse, Feb. 1-5, 10 cases.

SMALLPOX—FOREIGN.

Belgium: Ghent, Dec. 7-14, 1 death.
Brazil: Para, Jan. 11-18, 5 cases, 2 deaths; Rio de Janeiro, Jan. 5-12, 14 cases, 13 deaths.
Canada: Halifax, Jan. 25-Feb. 8, 2 cases; Winnipeg, Jan. 25-Feb. 1, 8 cases.
China: Shanghai, Dec. 22-Jan. 12, 14 cases, 33 deaths; cases foreign, deaths, native.
Ecuador: Guayaquil, Jan. 4-18, 13 deaths.
Egypt: Cairo, Jan. 11-18, 1 case.
France: Brest, Jan. 11-25, 2 cases, 1 death; Paris, 15 cases.
Great Britain: Edinburg, Jan. 18-25, 2 cases.
India: Calcutta, Dec. 2-25, 11 deaths.
Italy: General, Jan. 23-30, 67 cases.
Japan: Nagasaki, Dec. 22-Jan. 12, 3 cases, 1 death; Kobe, Jan. 5-11, 648 cases, 218 deaths; Yokohama, Jan. 6-13, 37 cases, 9 deaths.
Mexico: Mexico, city of, Dec. 28-Jan. 4.

YELLOW FEVER—UNITED STATES.

Texas: Galveston, Feb. 16-18, 2 cases, 2 deaths (in quarantine from S. S. *Crispin*), from Manaos and Para.

YELLOW FEVER—FOREIGN.

Brazil: Manaos, Dec. 21-Jan. 11, 13 deaths; Para, Jan. 11-18, 12 cases, 8 deaths; Rio de Janeiro, Jan. 5-12, 1 case.
Cuba: Cardenas, Feb. 14, 1 case, 1 death (from *S. S. Britannic*); Santa Clara, Jan. 6-Feb. 18, 4 cases.

CHOLERA—FOREIGN.

India: Calcutta, Dec. 14-28, 120 deaths; Rangoon, Dec. 28-Jan. 4, 2 deaths.
Russia: General, Dec. 25-31, 28 cases, 10 deaths; Jan. 1-7, 3 cases, 4 deaths; Tomsk, Jan. 1-8, 2 cases.

CHOLERA—INSULAR.

Philippine Islands: Manila, Dec. 28-Jan. 4, 31 cases, 23 deaths; Mariquina, Jan. 4, present.

PLAGUE—FOREIGN.

Brazil: Rio de Janeiro, Jan. 5-12, 3 cases.
Ecuador: Guayaquil, Feb. 13, present.
India: Calcutta, Dec. 7-28, 70 deaths; Rangoon, Dec. 28-Jan. 4, 2 deaths.
Portuguese East Africa: Lourenço Marquez, Nov. 8, Jan. 12, 8 cases, 5 deaths.

Book Notices

ANEMIA IN PORTO RICO. Report of the Permanent Commission for the Suppression of Uncinariasis, 1906-1907. Paper. Pp. 187.

About seventy pages of this book contain a report of the commission, then reports by directors of stations occupying 120 pages, and nearly as many more pages are given to statistics. This is all in Spanish, but is preceded by a translation of the report of the commission. The commission which formerly had this problem in charge was dissolved on the removal from Porto Rico of Dr. B. K. Ashford and Dr. W. W. King of the United States Army and the Marine-Hospital Service. The commission which makes this report was appointed in June, 1906. It had at its disposal about one-half as much money as was needed, but it is to be congratulated on having accomplished so much with what it had.

It is estimated that 90 per cent. of the population of Porto Rico suffer from uncinariasis. The commission treated 89,233 patients. They aim to exterminate the parasite by killing it, and by educating the people how to avoid it. They instruct farm owners that "ground itch" marks the infection of individuals, and tell how it can be prevented. A little over 37 per cent. of patients are between 15 and 29 years of age; a little more than 24 per cent. between 30 and 49, making between 15 and 49 a total of 61.6 per cent. of all cases. Very few patients are under 5 years of age or among the aged. A complete cure was obtained in 25.71 per cent. of cases, and a practical cure in 17.88 per cent.; 40 per cent. are still under treatment and 0.21 per cent. of those treated died.

It is still undetermined whether one attack confers immunity or not. The parasite in Porto Rico is the same as the one found in some of the southern states and known as *Uncinaria americanus* or as *Necator americanus*. It differs markedly from the European and Egyptian parasite. The latter had not been found on this continent until this last year, when Dr. Gutierrez, the president of this commission, found it in a 20-year-old negro boy, who was born and who had always lived on the island. This discovery was confirmed by others. A section of the report is devoted to a description of these and allied parasites.

The commission believes that the parasite can penetrate the skin without causing dermatitis and that the latter trouble is due to a secondary infection following the primary one by *Necator*. This view does not accord with the views of investigators in our southern states. One case is described in which infection took place through the hands. The commission believes, further, that the anemia is due to hemolysis, not to hemorrhage. Hemorrhage is very rare in these cases, even microscopic quantities of blood are seldom found in the stools. Even examinations at autopsy do not disclose evidence of hemorrhage and the worms do not contain blood. An excellent photomicrograph in this report shows the parasite attached to the wall of the intestine. A small portion of the submucosa is drawn into its mouth, and that part is denuded of epithelium. It is probable that the parasite lives on the epithelium rather than on blood.

Albumin in variable amounts, usually small and occurring irregularly, in the urine of these patients is common. So also are casts, generally hyaline, though granular or fatty casts

are also seen. These findings indicate degenerative renal lesions not inflammation. The anthelmintics used to cure uncinariasis often cause temporary albuminuria, but very rarely a complication of importance. At autopsies, renal degeneration is commonly found.

The treatment consisted in the repeated administration of thymol and beta-naphthol, preceded and followed by a saline. Eucalyptol was tried, but was not found as efficacious. The parasite was expelled in a lively condition. Ferruginous preparations are declared useless, but Blaud's pills were often given in order to keep the patient under observation.

This is a creditable report by a most important sanitary commission, for the disease is a formidable scourge in Porto Rico.

Kurzes Lehrbuch der organischen Chemie, von William A. Noyes, Professor der Chemie an der Universität Illinois. Mit Genehmigung des Verfassers ins Deutsche übertragen von Walter Ostwald, und mit einer Vorrede von Professor Wilhelm Ostwald. Leipzig: Akademische Verlagsgesellschaft m. b. H., 1907.

The translation into German of Professor Noyes' text-book on organic chemistry is further evidence that the work done in the United States in chemistry—even in organic chemistry, the special field of the Germans—and especially the methods of teaching chemistry, is being recognized abroad. Within recent years a number of text-books on chemistry, written by American authors, have been deemed worthy of translation into other languages; thus, the text-books of Prof. Ira Remsen, of Johns Hopkins University, and of Alexander Smith, of the University of Chicago, have been translated into German. To this now is added the text-book on organic chemistry by Prof. William A. Noyes, who is professor of chemistry at the University of Illinois and editor of the *Journal of the American Chemical Society*. In the introduction to this translation the justification for the translation of this work into the German language, which has a superabundance of similar text-books, is appropriately discussed by the eminent chemist, Prof. Walter Ostwald, of Leipzig. In this introduction Professor Ostwald states that justification for the addition to German literature of a further text-book on organic chemistry, in his estimation, is required, and that it is found in the independence and originality with which the author has taken up and treated the problem before him. Professor Ostwald then notes the necessity of giving a clear and comprehensive view of the field of organic chemistry when this study is first taken up. This, he believes, Professor Noyes accomplishes, and the student who takes up this introductory volume will obtain such a general view of organic chemistry that, in the future, he need not fear being lost in "the wilderness of organic chemistry" (dass er sich in dem Walde der organishen Chemie nicht mehr verirren wird). While this text-book gives the stuistry" (dass er sich in dem Walde der organischen Chemie nicht the author has nevertheless succeeded in indicating to the reader the vast scope of the subject before him without at the same time causing discouragement. The facts are brought out so clearly that the student comprehends that which is presented to him and, at the same time, gains confidence to master that which is to follow.

In the treatment of the subject the text-book of Noyes differs from similar works in that the author has had the courage and independence to abandon the old classification of dividing organic compounds into the fatty series and the aromatic series, a classification which, with the constantly increasing knowledge of organic compounds, is becoming more irksome every day, and Professor Noyes is entitled to the distinction which the translation of his text-book into the German language carries with it. Medical students who desire to obtain a general knowledge of organic chemistry can do no better than to peruse this little work or its English original.

IMMUNOCHEMISTRY. The Application of the Principles of Physical Chemistry to the Study of the Biologic Antibodies. By Svante Arrhenius. Cloth. Pp. 309. Price, $1.60 net. New York: The Macmillan Company, 1907. All Rights Reserved.

This interesting but highly technical book represents a summary of a series of lectures on the "immunity reactions" delivered at the University of California in the summer of 1904. The character of the subjects discussed may be appreciated by citing the following chapter subheads: Reversibility of Reactions Between Antibodies. Velocity of Reactions. Homogeneous Systems. Velocity of Reaction. Heterogeneous Systems. Equilibria in Absorption Processes. Neutralization of the Hemolytic Properties of Bases and of Lysins of Bacterial Origin. Neutralization of Diphtheria Toxin, Ricin, Saponin and Snake Venoms. The Compound Hemolysins, and the Precipitins and Their Antibodies.

Without question scientific medicine is to be congratulated on the entrance of one of the world's greatest students of physico-chemical processes, into the obscure field of the chemistry of the immunity reactions, and that Arrhenius has entered into this subject with a great deal of seriousness is evident from the scope of the undertaking, and the detail presented in this work as well as in the separate articles which have appeared from time to time. It is also fortunate that so skilled a chemist has had as his collaborator a biologist and pathologist of the experience of Madsen, an arrangement which the character of the study would seem to demand.

The results of these studies and similar studies carried on by others, have not received unqualified acceptance at the hands of many who are skilled in both the chemical and biologic aspects of the problems concerned. An important feature of the criticisms which have been made concerns the apparent complexity and unknown character of the toxins, bacterial constituents and the different antibodies, a condition which in the minds of many renders them unsuited to the exact methods employed in physico-chemical determinations. However true this may be, the inauguration of the study can meet only with approval, for in no other way can the applicability or the non-applicability of physico-chemical laws to the reactions of immunity be determined. Arrhenius thoroughly believes that they are applicable, and in this book presents a mass of chemical and mathematical data, bearing on reaction velocities between toxins and antitoxins, between other antigens and the corresponding antibodies, introducing original conceptions as to the agglutination and precipitation reactions, bringing numerous analogies from pure chemistry to bear on the subjects.

The book can be followed in its details only by those specially trained in the mathematical calculations involved, but here and there the author has summarized the results so clearly that it is not difficult to grasp the principles and to appreciate the results.

CANCER OF THE WOMB, ITS SYMPTOMS, DIAGNOSIS, PROGNOSIS AND TREATMENT. By Frederick John McCann, M.D. (Edin.), F.R.C.S. (Eng.), M.R.C.P. (Lond.). Cloth. Pp. 172, with illustrations. Price $7.00. New York: Oxford University Press, 1907.

In this monograph the term "cancer of the womb" is used in its very broadest application, since the author devotes space not only to carcinoma, but also to sarcoma and chorionepithelioma. The subject of carcinoma is handled thoroughly, with the usual classification into cancer of the cervix and cancer of the corpus. This work is based on forty-two cases of the author's, which he treated, for the most part, by vaginal hysterectomy. Removal by abdominal section is carefully considered, however, and a detailed description of the Wertheim operation is given. The value of early diagnosis is emphasized, and the method of obtaining this is clearly explained. This is the most valuable feature of the volume. Dr. McCann regards erosion of the cervix as an important factor in the etiology of cervical cancer. The account of sarcoma is well prepared, as is that of chorionepithelioma, though both subjects are treated briefly as compared with the recent extensive literature on these topics. In general, the author is at times not clear, some of his statements being contradictory. He is scarcely dogmatic enough to be of much aid to the general practitioner, while the specialist already possesses other works on these subjects that are more comprehensive and authoritative. References are made almost exclusively to German articles, the literature of Great Britain and America having been largely overlooked.

While but a monograph of 161 pages, the work is printed on heavy paper and supplied with many full-page illustrations, excellently reproduced, so that it takes on the size and form of a text-book.

AN INTRODUCTION TO THE STUDY OF THE INFANT'S STOOL. By Paul Selter, M.D., Solingen, Germany. Translated by Herbert M. Rich, B.L., M.D., Detroit. Detroit Medical Journal Company, Detroit, 1907.

The examination of the stool has always been recognized as a valuable aid in the diagnosis of digestive disorders, and as an indication which should govern therapeutic measures. Experience is showing more and more that success in treatment of digestive disorders depends very largely on perceiving what form of aliment is imperfectly digested and regulating the diet accordingly. The increased definiteness in the conclusions to be drawn from an inspection of the stools is due not so much to perfection of new methods of examination as to the more accurate knowledge of digestion and the recognition that the different forms of indigestion affecting the different classes of food are recognizable by the food remnants that can be seen in the feces. The examination is practically confined to an inspection with the unaided eye, a very simple microscopic examination and to taking the reaction. The study of the infant's stool forms a good introduction to the study of examination of the feces in general, because of the extreme simplicity of its composition and the relative agreeableness of handling it. Selter describes the methods of examination and shows by some clinical cases how valuable such examinations are in the management of infantile digestive disorders. The translation is well done, and the publication of this work in English should be an incentive to many practitioners to make use of this valuable aid to diagnosis and treatment.

TABACO-TABACOMANIA-TABAQUISMO. By E. L. Carvajal, M.D. With an Introduction by E. Liceaga, President of the Mexican National Board of Public Health, and Director of the National Medical School. Paper. Pp. 188. Price, $2. Published by the Department of the Interior. Callejon de Betlemitas, 8, Mexico, 1907.

Carvajal gives us the history of tobacco and its use by man in general and by the individual in particular, and the evils resulting therefrom. This book was published at government expense as a "work of public utility" for the prophylaxis of tobacco poisoning. The irritating action of tobacco on the mucosa of the air passages and digestive tract, on the blood and vessels and nervous system, etc., is reviewed in detail, with citations and examples, some from his own personal experience, as he confesses that he himself is a tobacco user. In prophylaxis he advises strict enforcement of regulations prohibiting smoking in schools, public offices and other public places over which the police have control, as the habit of smoking is almost invariably acquired by imitation. He appeals to the authorities to repress the use of tobacco among boys, and to physicians to dispel the popular idea that the tobacco habit is harmless, and in conclusion he appeals to the "Tobacco Fiends in General—My Companions in Slavery," saying, "We can continue our devotion to tobacco, knowing, as we do, its calamitous results, but let us warn the innocent who sin from ignorance."

WOMAN AND THE RACE. By Gordon Hart. Cloth. Pp. 264. Price, $1.00. Postpaid. Published at the Ariel Press: Westwood, Mass., U. S. A.

This little work is a plea for better instruction in sexual matters, especially in the case of women and children. The author touches on many controversial points—Malthusian practices, divorce, fashion, vegetarianism, the use of alcohol and tobacco, etc., some of them in a hardly orthodox, not to say iconoclastic, fashion, with which it can scarcely be, and clearly is not, expected that all right-thinking people must necessarily be in accord. But a spirit of reverent cleanness and a fairness to differing opinion permeates the book, and its tone is that of an attempt rather to make people think these matters out for themselves and find their own solution, so long as they do think of them, rather than to insist on the acceptance of the particular solutions of the problems as they appear to the author.

TEXT-BOOK OF DISEASES OF THE SKIN. By Arthur Van Harlingen, Ph.B. (Yale), M.D., Emeritus Professor of Dermatology in the Philadelphia Polyclinic. Fourth Edition, Thoroughly Revised and Rearranged. Illustrated. Cloth. Pp. 482. Price, $3.00. Philadelphia: P. Blakiston's Son & Co., 1907.

This edition differs from previous ones in its arrangement. The various diseases, instead of being listed alphabetically, are arranged according to the classification generally used by American dermatologists. The text has been brought up to date and a number of new illustrations have been added.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

CONNECTICUT State Board of Medical Examiners, City Hall, New Haven, March 10. Secretary, Dr. Charles A. Tuttle, 196 York St., New Haven.

CONNECTICUT Homeopathic Board of Medical Examiners, New Haven, March 10. Secretary, Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

CONNECTICUT Eclectic Board of Medical Examiners, New Haven, March 10. Secretary, Dr. T. S. Hodge, 16 Main St., Torrington.

IOWA State Board of Medical Examiners, Capitol Building, Des Moines, March 10-12. Secretary, Dr. Louis A. Thomas, Des Moines.

MASSACHUSETTS Board of Registration in Medicine, Room 15, State House, Boston, March 10-12. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

MAINE Board of Registration of Medicine, State House, Augusta, March 17-18. (Note change of place from Portland.) Secretary, Dr. William J. Maybury, Saco.

Ohio December Report.

Dr. George H. Matson, secretary of the Ohio State Board of Medical Registration and Examination, reports the written examination held at Columbus, Dec. 10-12, 1907. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 27, of whom 23 passed and 3 failed. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
American Med. Miss. Coll.	(1906)	85
Chicago Homeo. Med. Coll.	(1904)	85
College of P. and S., Baltimore	(1906) 75; (1907)	88
Harvard Med. School	(1906)	91
University and Bellevue Hosp. Med. Coll	(1905)	87
University of Buffalo	(1907)	87
Starling Med. Coll.	(1906)	76
Toledo Med. Coll.	(1907)	79
Eclectic Med. Inst., Cincinnati	(1905)	76
Cleveland Coll. of P. and S.	(1907)	86, 88
Ohio Med. University	(1907)	80, 84
University of Pennsylvania	(1907)	87
Western Pennsylvania Med. Coll.	(1907)	87
Jefferson Med. Coll.	(1907)	78, 86
Cleveland Homeo. Med. Coll	(1898) 79; (1906)	83
Med. Coll. of Ohio	(1907)	87
University Coll. of Med., Richmond	(1901)	87
University of Prague, Austria	(1902)	81
FAILED.		
Hering Med. Coll.	(1894)	67
Cleveland Homeo. Med Coll.	(1907)	70
Starling Med. Coll.	(1906)	66

Maine March, July and November Reports.

Dr. William J. Maybury, secretary of the Maine Board of Registration of Medicine, reports the written and oral examinations held at Augusta and Portland, March 5, July 9-10 and Nov. 12, 1907. The number of subjects examined in at these examinations was 10; total number of questions asked, 100; percentage required to pass, 75.

At the examination held at Portland, March 5, the total number of candidates examined was 11, all of whom passed. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Baltimore Med. Coll.	(1905) 83; (1906)	91.8
Boston University	(1906) 86.4, 87.6,	88.3
Harvard Med. School	(1905) 84, 94; (1906) 85,	90
Dartmouth Med. School	(1906)	84
Jefferson Med. Coll.	(1906)	81.5

At the examination held at Augusta, July 9-10, the total number of candidates examined was 52, of whom 50 passed and 2 failed. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Medical School of Maine.	(1879) 82.3; (1907) 78.5, 81.4, 81.5, 82.2, 82.3, 84.5, 84.6, 85.1, 85.4, 87, 87.1, 87.1 88.1, 90.1, 90.3,	92.6.
Baltimore Med. Coll.	(1907)	86.5
Baltimore University	(1890) 88.5; (1899)	82
Harvard Med. School	(1907)	90.4
College of P. and S., Boston.	(1905) 82.4, 86.1; (1906) 89.2; (1907) 79.6.	
Tufts Coll. Med. School.	(1894) 80.4; (1905) 89.3; (1906) 81.4, 89, 89.1; (1907) 80.4.	
Dartmouth Med. School	(1895) 84.5; (1902)	81.2
Cornell University	(1907)	90.2
College of P. and S., New York	(1903)	83.4
Medico-Chirurgical Coll., Philadelphia	(1904)	83.4
Jefferson Med. Coll.	(1906)	88.1
Western University of Pennsylvania	(1907)	87.2
University of Pennsylvania	(1906) 85.5; (1907)	87
University of the South	(1903)	76.5
Laval University, Quebec	(1905) 84.2; (1907) 83.2, 85, 86,	86.2
McGill University, Quebec	(1907) 88.5, 91.2,	91.4
Trinity Medical College, Ontario	(1903)	83.4
FAILED.		
Kentucky School of Med.	(1906)	69.1
University of the South	(1901)	65

At the examination held at Portland, November 12, the total number of candidates examined was 16, of whom 13 passed and 3 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Kentucky School of Med.	(1906)	81.5
Tufts Coll. Med. School	(1906) 88.3; (1907)	89.1, 93.1
Boston University	(1907)	91.4
Woman's Med. Coll. of New York	(1895)	94.4
University of the South	(1901)	81.4
Laval University, Quebec.	(1905) 80.3, 82.4; (1906) 81.6; (1907) 81.2, 84.1.	
Bishop's College, Montreal, Quebec	(1901)	77.6

FAILED.

Kentucky School of Med.	(1906)	*63.6
College of P. and S., Baltimore	(1905)†	
Harvard Med. School	(1897)†	

* Second failure.
† Failed to make necessary percentage of 60 in one branch.

Maryland December Report.

Dr. J. M. Scott, secretary of the Maryland board, reports the examination held at Baltimore, Dec. 10-13, 1907. The number of subjects examined in was 9; percentage required to pass, 75. The total number of candidates examined was 45, of whom 34 passed and 11 failed. The following colleges were represented:

PASSED.

College.	Year of Graduation.	Anatomy.	Surgery.	Pathology.	Obstetrics.	Practice.	Chemistry.	Mat. Med.	Therapeutics.	Physiology.	Average.
Howard University	1907	86	75	81	63	82	87	95	97	75	82
Howard University	1907	81	85	67	88	91	67	75	85	90	81
Howard University	1906	70	95	50	87	86	68	82	76	75	77
Howard University	1907	86	90	59	88	85	62	72	73	75	77
Howard University	1907	52	80	68	91	76	64	90	94	75	77
George Wash. Univ.	1907	77	85	83	100	90	92	98	92	92	90
George Wash. Univ.	1906	85	90	63	100	87	47	81	76	85	79
George Wash Univ.	1907	76	85	76	100	87	93	80	84	75	84
George Wash. Univ.	1906	76	70	70	92	77	83	76	81	75	78
George Wash. Univ.	1907	77	75	65	78	88	68	75	75	75	75
Amer. Med. Miss. Coll.	1906	67	90	86	90	84	93	75	75	95	84
Johns Hopkins Med. Sch.	1906	84	90	88	100	87	82	89	90	68	86
Johns Hopkins Med. Sch.	1907	89	90	97	100	84	79	74	95	70	86
Johns Hopkins Med. Sch.	1907	77	90	97	92	89	95	90	95	95	91
Johns Hopkins Med. Sch.	1903	84	98	82	91	93	97	96	94	95	92
Johns Hopkins Med. Sch.	1906	94	90	88	100	87	82	89	90	68	86
Johns Hopkins Med. Sch.	1907	89	90	95	100	96	76	96	97	100	93
Johns Hopkins Med. Sch.	1907	75	90	84	76	81	75	95	90	92	84
Woman's Med. Coll. Balt.	1906	61	80	55	90	83	91	93	85	73	79
Coll. of P. and S., Balt.	1907	89	85	80	82	87	90	81	96	80	86
Coll. of P. and S., Balt.	1907	85	80	91	92	94	91	88	87	90	89
University of Maryland.	1906	83	85	81	87	80	77	85	86	95	84
University of Maryland.	1907	91	80	88	85	77	84	95	91	85	86
University of Maryland.	1907	82	85	54	83	75	64	76	76	85	76
University of Maryland.	1907	75	90	77	78	75	55	75	90	85	78
University of Maryland.	1907	58	85	75	100	76	76	68	62	80	76
University of Michigan.	1902	90	95	100	90	94	90	98	98	92	94
Univ. of Pennsylvania.	1905	61	90	95	84	88	77	92	95	83	85
Univ. of Pennsylvania.	1906	84	80	82	84	80	82	80	77	66	79
Univ. of Pennsylvania.	1907	79	80	65	85	79	55	80	72	80	75
Univ. of Pennsylvania.	1907	88	80	91	86	80	85	76	81	78	83
Woman's Med. Coll. of Pa.	1903	80	80	72	96	83	84	95	94	86	86
Univ. of Moscow, Russia.	1893	75	80	58	100	86	64	77	80	60	76
Univ. of Turin, Italy	1906	58	80	80	86	85	80	80	80	75	78

FAILED.

George Wash. Univ.	1907	32	80	67	85	79	44	62	71	75	65
George Wash. Univ.	1907	19	85	40	80	89	40	79	86	60	64
Howard University	1907	62	70	26	61	71	41	63	61	75	59
Baltimore University	1907	44	75	34	56	62	53	84	80	75	63
Baltimore University	1907	28	70	18	10	55	39	36	24	56	37
University of Maryland.	1907	47	60	55	76	64	23	84	90	70	63
University of Maryland.	1907	30	80	68	90	68	47	82	81	70	68
Maryland Medical College.	1907	16	80	36	55	75	10	75	70	85	56
Coll. of P. and S., Balt.	1907	33	85	83	84	68	63	60	45	75	66
Medico-Chir. Coll., Phila.	1905	32	75	23	63	44	32	64	53	67	53
Jefferson Med. College.	1907	66	85	56	68	96	58	75	75	67	72

The following questions were asked:

ANATOMY.

1. Name the bones and ligaments entering into the formation of the ankle joint. 2. What anatomic structures pass through the sphenoidal fissure. 3. After ligation of the common carotid artery, how is collateral circulation established? 4. Describe the pancreas, giving its relations. 5. Name muscles attached to the upper third of the femur. 6. Give origin, course and distribution of the phrenic nerve.

PHYSIOLOGY.

1. Name the constituents of normal urine. Name the abnormal constituents of urine also. 2. What is meant by blood pressure and how is it regulated?. 3. Name the glands in the small intestines and state their functions. 4. What is accomplished physiologically by the portal circulation? 5. Name the varieties of epithelium and describe briefly the function of each. 6. Give the physiologic action of normal salt solution.

CHEMISTRY.

1. Define crystalline, colloid, amorphous, crystalloid, nascent. 2. Give composition (formula), mode of preparation and general properties of lime water. 3. Name the halogens and give their general properties and occurrence in nature. In testing for which one is starch used? Describe the procedure in detail. 4. Give chemical composition (formula) and general properties of bismuth subnitrate and explain the dark color of the stools following its therapeutic use. Name its most dangerous impurity, and give test for the detection of same. 5. Describe the element nitrogen, with its occurrence in nature, its general properties and relation to vegetable and animal life. 6. Give in detail two reliable dissimilar tests for the detection of albumin in the urine. Name the substances in each test with which it may be confused and describe the methods of differentiation of each.

PATHOLOGY.

1. Name and describe briefly the various laboratory methods of sterilization by heat. Explain "fractional sterilization" and give reasons for its employment. 2. Name and give method of staining of the specific organism in the following diseases: Meningitis (2 varieties) and gonorrhea. Give Gram's differential method of staining the latter. 3. Give the gross pathology of ulcer of the stomach with usual location of the same and theories as to its causation. 4. Define ascites and give the gross pathology of three diseases giving rise to it. 5. Name the connective tissue tumors and state which are malignant. Of those malignant describe the one most so and name its subvarieties in the order of the malignancy. 6. Give the gross pathology of a severe case of malarial fever (estivo-autumnal type). Describe the parasite causing same and name the insect which acts as an intermediary.

MATERIA MEDICA.

1. What are the preparations of sodium and the dose of each? 2. What is the dose of apomorphin, atropin, caffein, digitalin, elaterium and santonin? 3. What are the preparations of jaborandi: its alkaloid and dose? 4. What is the composition of compound cathartic pill, brown mixture, seidlitz powder and Donavan's solution? 5. Name the preparations of mercury and give doses. 6. How are chloroform and ether obtained.

THERAPEUTICS.

1. (1) Define therapeutics, (2) general, (3) special, (4) empirical, (5) rational, (6) prophylactic, (7) mechanical. 2. What are the therapeutic uses of the preparations of belladonna? Describe symptoms and give treatment of belladonna poisoning. 3. Give physiologic action and therapeutic uses of alcohol. 4. Write a prescription for follicular tonsillitis and one for acute bronchitis. 5. Antidiphtheria serum. (1) How and when to be used; (2) dose, prophylactic; (3) curative. 6. Give the physiologic action and therapeutic uses of salicylic acid and the salicylates.

PRACTICE.

1. a, Define pyelitis; b, define pertussis; c, define urticaria and in addition give its synonym; d, describe Hutchinson's teeth and state in what disease they most commonly occur. 2. a, Give the history of a case of incipient pulmonary tuberculosis; b, how would you make the diagnosis positive? c, what treatment would you recommend and what measures would you take to prevent the spread of infection? 3. a, Give differential diagnosis between follicular tonsillitis and tonsillar diphtheria; b, give differential diagnosis between measles and scarlet fever. 4. a, Give the treatment of locomotor ataxia; b, give the treatment of lobar pneumonia; c, give the treatment of chorea. 5. a, Give diagnosis of locomotor ataxia; b, give diagnosis of empyema; c, give diagnosis of gallstones. 6. a, What methods would you employ were you called to a case of suspected variola? b, how would you diagnose this case and what treatment would you use for (1) the patient, (2) to prevent the spread of the disease?

SURGERY.

1. Give some of the chief causes of delayed union in fractures and the treatment you would adopt for each of these causes. 2. What are postnasal adenoids, and what is the treatment? 3. Give differential diagnosis, clinical course and treatment of gonorrheal arthritis. 4. Describe several forms of corneal ulcer, their causes and treatment. 5. Differentiate calculus in bladder from calculus in kidney. 6. Give the differential diagnosis of malignant and non-malignant breast tumors.

GYNECOLOGY AND OBSTETRICS.

1. Describe treatment of a shoulder presentation. 2. What method would you adopt to relieve a prolapsed fetal cord. 3. How would you manage a case of retained placenta associated with profuse hemorrhage. 4. Give me your treatment of a prolapsed and retroflexed uterus. 5. Give indications for and methods of applying a vaginal tampon and state how long it should remain in the vagina. 6. Describe the operation for repair of a complete perineal rupture.

Marriages

GEORGE W. BRONSON, M.D., to Miss Minnie C. Nater, both of Streator, Ill., February 5.

LOUIS H. LIMAURO, M.D., to Miss Chiara Longobardi, at New Haven, Conn., February 17.

FRED C. DOWNEY, M.D, to Miss Daisy Vance Dinger, both of Edinburg, Va., February 12.

TULLIO A. ROTTANZI, M.D., to Miss Alice Deming, both of San Francisco, February 12.

HUGH MUNRO MILLER, M.D., to Miss Florence Raff, both of South Bend, Ind., February 8.

CHARLES D. CARR, M.D., Philadelphia, to Miss Sophie Ashley of Wilkesbarre. Pa., February 12.

MORTIMER A. HAUSER, M.D., Arapahoe, Neb., to Miss Flora Wehn of Beatrice, Neb., February 12.

RAYMOND WALLACE, M.D., Chattanooga, Tenn., to Miss Lesley Jeffries of Norfolk, Va., February 25.

FRANK E. MCCANN, M.D., to Miss Catherine Crystal Bellebaum, both of Louisville, Ky., February 14.

JOHN FLOYD MURDOCH, M.D., Pittsburg, Pa., to Miss Elsie Constance Close of Scranton, Pa., February 11.

FRANK A. LUPTON, M.D., Birmingham, Ala., to Miss Mary Watts Woods of Charlottesville, Va., February 12.

ARTHUR THOMAS DAVIS, M.D., Clark Mills, N. Y., to Miss Mary Cerrillia Buckley of Utica, N. Y., January 8.

JOSEPH PAUL RITENOUR, M.D., Uniontown, Pa., to Miss Margaret Craig Richmond of Knoxville, Tenn., January 2.

J. R. BEAN, M.D., Mullan, Idaho, to Miss Mabel Clare Van Wagenen of Chicago, at Spokane, Wash., January 22.

JOHN WILLIAM KISSANE, M.D., Norwood, N. Y., to Miss Jessie Georgia Marshall of Malone, N. Y., February 5.

Deaths

Aaron K. Baldwin, M.D. New York University Medical College, New York City, 1871; a member of the American Medical Association; surgeon of the First Infantry, N. G. N. J., with the rank of captain; later lieutenant colonel and surgeon of the First Brigade; a member of the State Board of Medical Examiners from 1890 to 1905; police surgeon of Newark in 1875 and in 1884; house surgeon at St. Michael's Hospital from 1873 to 1878; and a member of the visiting staff and once president of the medical board of Newark City Hospital; once president of the Newark Medical Society, and in 1901 president of the Essex Medical Society; a member of the local board of pension examiners; at one time a member of the board of education; died at his home in Newark, February 9, from cirrhosis of the liver, after a protracted illness, aged 58.

Asa Williams Wilkinson, M.D. New York University Medical College, New York City, 1855; interne at the City Hospital at Blackwell's Island; and later physician in charge of the Children's Hospital, Randall's Island; assistant to the chair of chemistry and toxicology in Bellevue Hospital Medical College from 1861 to 1878; assistant to the chair of chemistry and physics in the College of the City of New York; widely known for his practical work in the improvement of carbureting of street gas; the chemical engineering of water gas manufacture, and since 1880 chemist of the Mutual Gas Light Company, New York City; died at his room in the Hoffman House, New York City, January 25, from acute gastritis, aged 75.

George Alfred Baxter, M.D. Bellevue Hospital Medical College, New York City, 1873; president in 1890 of the Tennessee State Medical Association and a member of the Hamilton County Medical Society; for nearly thirty years surgeon of the Alabama Great Southern Railroad and Cincinnati Southern Railroad and the street railways of Chattanooga; formerly assistant surgeon of the Erie Railroad; for many years a trustee and member of the staff of Erlanger Hospital; whose work during the yellow fever epidemic of 1878 will never be forgotten by the citizens of Chattanooga, died suddenly in his office in Chattanooga, February 12, from heart disease, aged 56.

James Wallace Putnam, M.D. Dartmouth Medical School, Hanover, N. H., 1877; a member of the American Medical Association; local surgeon for the New York Central & Hudson River Railroad at Lyons, N. Y.; president of the village for four years; physician of Wayne County for nine years, and pension examiner for thirteen years; died suddenly, from cerebral hemorrhage, in the New York Central station, Buffalo, N. Y., February 9, aged 58.

Andros Palmer Chesley, M.D. Long Island College Hospital, Brooklyn, 1883; a member of the American Medical Association; formerly president of the Center District (N. H.) Medical Society; at one time principal of the Wakefield (N. H.) Academy and U. S. pension examiner; a member of the staff of Margaret Pillsbury General Hospital, Concord; died at his home in that city from nephritis, after a prolonged illness, February 9, aged 52.

Horace B. Wing, M.D. Northwestern University Medical School, Chicago, 1887; a member of the American Medical Association; formerly professor of clinical medicine and physical diagnosis, and later dean of the Medical Department of the University of Southern California, Los Angeles; for many years local surgeon of the Santa Fé System; died at his home in Los Angeles, February 12, from pneumonia, following an attack of influenza, aged 50.

Oscar Burbank, M.D. Medical School of Harvard University, Boston, 1848; a member of the Iowa State and Bremer County medical societies; for 54 years a practitioner of Waverly, Iowa; said to have been the oldest practitioner of Iowa; who was taking a course of lectures on modern surgery in Drake University, College of Medicine, Des Moines; died in that city, February 7, from pneumonia, after an illness of two weeks, aged 88.

Henry Newton Heinemann, M.D. College of Physicians and Surgeons in the City of New York, 1871; formerly chief clinical assistant in his alma mater; visiting physician at Mount Sinai Hospital; who had lived abroad for several years, making his headquarters at Bad Nauheim in summer and spending his winters in Paris; died suddenly in Paris, February 11, aged about 55.

Charles E. Gimbel, M.D. George Washington University, Department of Medicine, Washington, D. C., 1900; of Joplin, Mo.; formerly interne at the St. Louis City Hospital; assistant superintendent of the St. Louis Female Hospital; assistant at the St. Louis Polyclinic Hospital, and assistant at the St. Louis Insane Asylum; died at Fayetteville, Ark., February 6, aged 31.

John Elmer Kerr, M.D. Western Pennsylvania Medical College, Pittsburg, 1903; a member of the Medical Society of the State of Pennsylvania and Fayette County Medical Society; for eight months an officer of the board of health of Pittsburg, and later a practitioner of Belle Vernon, Pa.; died in Mercy Hospital, Pittsburg, January 20, from pneumonia, aged 29.

John W. Graham, M.D. Jefferson Medical College, Philadelphia, 1867; for several terms president of the Colorado State Medical Society and a member of the Denver County Medical Society; a veteran of the Civil War; and for thirty-eight years a prominent practitioner of Denver; died suddenly at his home in that city, January 14, from heart disease, aged 64.

William Badger, M.D. College of Physicians and Surgeons in the City of New York, 1861; assistant surgeon in the Army during the Civil War, and in charge of the Army General Hospital, David's Island, New York Harbor; a member of the New York Academy of Medicine; died at his home in Flushing, N. H., February 13, aged 73.

Joseph Henry Utley, M.D. Bellevue Hospital Medical College, New York City, 1878; a member of the American Medical Association; a graduate of the U. S. Naval Academy, Annapolis; physician for the Thayer (Ill.) Milk Company; died at his home in Thayer, February 16, from pneumonia, after an illness of two weeks, aged 68.

Rush Alexander Jones, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1890; a member of the American Medical Association; surgeon to the Southern Engine and Boiler Works, Jackson, Tenn., and a popular and prominent practitioner of Jackson; died at his home February 4, from intestinal disease, aged 44.

William Washington Talley, M.D. Medical College of Virginia, Richmond; for a time resident physician at the Retreat for the Sick, Richmond, and later at the Tuberculosis Sanatorium, Ironville; died at his home in Richmond, Nov. 29, 1907, from pulmonary tuberculosis, after an illness of six months, aged 21.

John J. Maloney, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1885; of Cincinnati; a member of the American Medical Association; died at the Cincinnati City Hospital, February 13, from erysipelas complicated by *x*-ray burns and pneumonia, after an illness of eight days, aged 43.

Charles Peck Smith, M.D. College of Physicians and Surgeons in the City of New York, 1874; a member of the medical societies of the State and County of New York; formerly a member of the surgical staff of Bellevue Hospital; died from heart disease at his home in New York City, February 8, aged 59.

Orlando Mixter, M.D. New York University Medical College, New York City, 1882; a member of the Massachusetts and Worcester District medical societies; died at his home in Worcester, February 6, from laryngeal tuberculosis, after an illness of a year, aged 66.

Oscar F. Renick, M.D. University of Louisville (Ky.) Medical Department, 1860; coroner of Bates County, Mo.; an assistant surgeon in the Army during the Civil War; died at his

home in Butler, Mo., February 14, from influenza, after a brief illness, aged 82.

Joel J. Crook, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1863; surgeon of the Seventh Kansas Volunteer Cavalry during the Civil War, and for many years a resident of Leadville, Colo.; died at the home of his son in Glenwood Springs, Colo., February 14, from pneumonia, aged 80.

Otto P. Dillon, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1890; of Rushville, Ind.; was instantly killed in a collision between his automobile and a passenger train while making a professional call, February 9, aged 39.

Bonnie G. Wood, M.D. Memphis Hospital Medical College, Memphis, Tenn., 1890; a member of the American Medical Association; died at his home in Cominto, Ark., Oct. 11, 1907, from pernicious malarial fever, after an illness of ten days, aged 40.

John S. F. Featherston, M.D. University of Louisville (Ky.) Medical Department, 1869; a member of the American Medical Association; and a prominent practitioner of Macon, Miss., died at his home February 13, after a brief illness, aged 62.

George W. Roffey, M.D. Eclectic Medical Institute, Cincinnati, 1877; for six years in charge of the hospital of the Franklin County Infirmary, Columbus, Ohio; died suddenly from heart disease, in that institution, February 9, aged 60.

Robert Innocence Thomas; for sixty years a practitioner of medicine, and a surgeon in the Army during the Civil War; died at Los Angeles, Cal., Nov. 21, 1907, from hernia and intestinal obstruction, after an illness of ten days, aged 89.

Milford L. Bates, M.D. Berkshire Medical College, Pittsfield, Mass., 1867; a member of the medical societies of the State of New York and County of Columbia; died at his home in Canaan Four Corners, N. Y., January 26, aged 62.

Lucius Lee Ardrey, M.D. Bellevue Medical College, New York City, 1906; formerly of Burgaw, N. C., died at his home in Bandera, Texas, February 12, from pulmonary tuberculosis, after an illness of several years, aged 34.

Henry Clay Wood, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1867; a veteran of the Civil War; died at his home in West Chester, Pa., February 12, from nephritis, after an illness of two years, aged 63.

Thomas W. LeCrone, M.D. Starling Medical College, Columbus, Ohio, 1882; a practitioner of Millersport, Ohio, for 20 years; died at his home in Columbus, February 11, from diabetes, after a long illness, aged 55.

William Holden Chace, M.D. University of Buffalo (N. Y.) Medical Department, 1877; a member of the American Medical Association, and a well-known practitioner of Buffalo; died at his home, February 14, aged 45.

Samuel Jeffrey Avery, M.D. Rush Medical College, Chicago, 1864; a member of the Illinois State and Chicago medical societies; died suddenly at his home in Chicago, February 17, from heart disease, aged 80.

Elmer Shirts, M.D. Kentucky School of Medicine, Louisville, 1890; treasurer of Greene County, Ind.; formerly a practitioner of Lyons, Ind.; died suddenly from edema of the glottis, February 6, aged 47.

A. Matthew Bevier, M.D. University of Buffalo (N. Y.) Medical Department, 1866; for more than 40 years a practitioner of Owasco, N. Y.; died at his home in Niles, N. Y., January 27, aged 87.

Daniel A. Langhorne, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1848; a Confederate veteran; died at his home in Lynchburg, Va., February 10, after a long illness, aged 82.

John French Gibson, M.D. University of Wooster, Medical Department, Cleveland, 1873; a veteran of the Civil War; died at his home in Cleveland, February 8, from pneumonia, after a brief illness, aged 62.

James T. Rosser, M.D. Atlanta (Ga.) Medical College, 1876; surgeon in the Confederate service during the Civil War; died at his home in Atlanta, from pneumonia, February 10, after a short illness, aged 71.

George Hilton Wood, M.D. Jefferson Medical College, Philadelphia, 1880; U. S. pension examiner at New Bethlehem, Pa.; died at his home in that city, February 7, from broncho-pneumonia, aged 54.

Richard Douglas, M.D. Medical Department, University of Nashville, Tenn., 1881; died from nephritis February 18. A full notice will appear in the issue of March 7.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Legislation in Ohio.

The joint committee on public policy and legislation of the Ohio State Medical Association met at Columbus January 21 for the discussion of bills now before the state legislature. Dr. J. W. Clemmer stated that an organized effort was being made on the part of proprietary manufacturers to defeat the pure food and drug law. He also stated that the attorney of the proprietary association, Mr. Douglas of Chicago, and the president, Mr. Frank Cheney of Toledo, proprietor of Hall's Catarrh Cure, were at Columbus for that purpose. The committee approved the pure food and drug bill. A committee was appointed to consider the criminal abortion bill and to confer with legal representatives regarding it. The nurses' bill, creating a separate board of examination for nurses, was not approved. The bill forbidding the public advertising of venereal diseases was endorsed. The optometry bill was then considered and Dr. Gibson of Youngstown stated that the bill has been so modified as to place the control of the licensing of oculists under the state board of medical examination. With this understanding the bill was endorsed as read. A bill providing for the establishment of deputy county health officers was endorsed, also a bill authorizing the county commissioners to establish a laboratory in each county. This bill permits two or three counties, by joining together, to establish a common laboratory for pathological and medical examination. A bill regulating the "practice of non-medical healing" was positively condemned.

Vital Statistics Bill Defeated in Virginia.

The bill for registration of deaths in Virginia has been withdrawn. This action has been taken largely on account of the opposition of the undertakers, who did not wish to take the trouble of filling out applications for burial permits. As a result, Virginia must do without any reliable record of deaths or causes of deaths until the undertakers are willing to fill out the necessary blanks. Is it possible that the undertakers in Virginia have more influence with the legislature than has the medical profession?

County Society Scientific Programs.

In the *Journal of the Kansas Medical Society*, January, 1908, appears an article on "Success and Failure in Medical Organization," by Dr. Frank G. Carmichael of Goodland. Dr. Carmichael said in part:

The value of the organization is determined by the ability, tact, energy and zeal of its members. Its maintenance and life are dependent on the same factors. In our own society in the last two years the meetings have been only fairly well attended. The number of members at any meeting did not exceed seven, out of a total membership of twenty Our programs at each meeting have announced contributions from members, the majority of whom have not appeared at the meeting, or, appearing, have not prepared or presented their papers. The effect of this failure on the part of those who have promised to contribute has been most detrimental to the interests of the society. I know of no better way to bring about an early demise of any society or organization than a failure on the part of those on its program to do their part. Examining into the reason for this condition, experience shows that at no time has the attendance exceeded 33 per cent. of the membership. The natural conclusion is that the remaining 66 per cent. are either too busy or are not sufficiently interested in the welfare of the society to attend its meetings. If the former supposition were tenable, the unfortunate members whose practices are so exacting as to give them no time to attend medical meetings would be the objects of our deepest sympathy. Such is not the case. There is no member of this society whose time is so thoroughly taken up that he can not spare a day every three months for his own advancement and that of the profession. We may, therefore, frankly ascribe the failure in attendance to lack of interest, disinclination or fear that a competitor may filch one of our patients during our absence.

Dr. Carmichael's account of his own society is a frank description of conditions which prevail in many county organizations. The reason for this is apparent in Dr. Carmichael's question and answer: "Why is it that so many of those who have promised papers have failed to materialize? Every member of the society is capable of producing a first-class paper every three months. During the past two years there have been only six members of the society who have contributed papers, which is less than one-third of the membership." Herein lies the explanation for the failure of many county societies. If every member of Dr. Carmichael's society is capable of producing a first-class paper every three months, this society certainly has a phenomenal membership. Few physicians are able to produce a really valuable paper every three months or every six months. In few county societies will more than one-third of the members contribute original papers. The county society must have some other work and attractions than listening to papers contributed by its members.

This need has been met, in some cases, by the adoption of the postgraduate study course which makes all the members students, as they should be, and opens up the entire field of medicine and surgery instead of restricting the proceedings and discussions of the society to the observation or the experience of individual members. Other county societies have considered it more imperative to take up the needs of the public along hygienic and sanitary lines and to consider and act on such matters as pure food, pure water, drainage, sewage disposal, milk inspection, control of contagious diseases and other questions affecting the general health of the community.

It does not matter what is the particular line of work followed, so long as the society has some object outside of itself. No society whose interest is limited solely to itself nor whose members are restricted to material furnished by their fellow members, will develop the greatest vigor or usefulness.

Dr. Carmichael's paper is a frank and honest criticism of the county society which has attempted to proceed along conventional lines. If societies will cease to confine themselves entirely to the old plan of reading and discussing papers read by their own members and will look for work which needs to be done and will take hold of it with vigor and energy, there will be no difficulty in getting members to the meetings or in securing subjects for discussion.

The County Society and Medical Libraries.

From time to time we have recorded the establishment of, or the good work done by, libraries of medical societies in various parts of the country. In the February number of the *Kentucky Medical Journal* appears the report of the library committee of the Jefferson County Medical Society, which shows what a county society can do. Similar work is being done by medical societies in various parts of the country. What has been done in New York, in St. Louis, in St. Paul, in Louisville, in Los Angeles and in some other cities, and by county societies at Bowling Green, Ky., Jacksonville, Ill., and other places, can be duplicated in all cities and can be imitated on a smaller scale in the smaller cities, and even in counties in which there is no large town.

Few physicians can afford to purchase all the books they need to keep abreast of the times, for this would require many volumes that would be referred to only at rare intervals. Physicians receive monographs, reprints and periodical literature in enormous quantities, which after the first reading becomes unavailable, either for lack of place or of index system.

There are few societies which could not provide a small room and accumulate, by purchase or donation, a few standard works as a nucleus. Then, if each member contributed the journals which now, sometimes unopened and unread, find a resting place in the waste basket, it would be only a few years until a collection of valuable literature could be accumulated. Interest once aroused, the collection would grow rapidly. The days of individual effort are passing. Collectivism and cooperation are the watchwords in all forms of activity to-day, and there is no reason why physicians should not fall in line and enable each individual to profit by the collective resources of all.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

SIXTH MONTH.

DISEASES OF BLOOD AND DUCTLESS GLANDS.

First Weekly Meeting.

Anatomy of Blood.
Physiology of Blood.
Physiology of Spleen, Lymph Glands and Bone Marrow.

Second Weekly Meeting.

Secondary Anemia: Etiology and Microscopic Changes.
Chlorosis: Etiology, Symptoms and Microscopic Changes.
Pernicious Anemia: Pathologic Anatomy, Symptoms and Blood Changes.

Third Weekly Meeting.

Splenomedullary Leukemia: Symptoms, Blood Changes and Treatment.
Lymphatic Leukemia: Pathologic Anatomy and Diagnosis.

Fourth Weekly Meeting.

Hodgkin's Disease: Pathologic Anatomy and Symptoms.
Pathology and Diagnosis of Addison's Disease.

Monthly Meeting.

The Therapeutic Action of Iron.
Treatment of Pernicious Anemia.
The Value and Limitations of Blood Examinations.

FIRST WEEKLY MEETING.

Anatomy of the Blood.

Origin, Structure, Corpuscles and Plasma.

Plasma: Corpuscles—Red and white.
Red: Size, shape, number and structure.
White: Lymphocytes and leucocytes.
Lymphocytes: Granules, ameboid movement. (a) Transition forms. Nucleus, cytoplasm, staining, number. (b) Polynuclear. Nucleus, granules, staining, number. Eosinophiles. (c) Mast cells. Nucleus, granules, staining.

Physiology of the Blood.

Blood plasma, blood serum and defibrinated blood. Reaction of blood, cause, method of determination. Specific gravity, method of determination, variations, causes.

Red Corpuscles: Structure. Stroma. Hemoglobin, form in corpuscle, percentage of corpuscle. Globin, hematin, hemochromogen. Combination of hemoglobin with gases. Origin of red corpuscles, changes in bone marrow. Destruction of red corpuscles, facts for and against spleen, probable site.

White Corpuscles: Origin of leucocytes and of lymphocytes. Normal number, physiologic leucocytosis. Functions of leucocytes: (1) phagocytosis, (2) aid in absorption of fats and peptones, (3) aid in coagulation of blood, (4) help supply proteids of blood plasma.

Blood Plates: Size, shape, possible functions.

Blood Plasma: Chemical composition, proteids, extractives, salts, enzymes. Coagulation of blood. (1) Fibrogen, (2) prothrombin, (3) calcium salts, (4) thrombin, (5) fibrin.

Physiology of the Spleen.

Histologic structure of spleen. Rhythmic contractions. Theories of function: (1) formation of red corpuscles, (2) destruction of red corpuscles, (3) production of urie acid, (4) production of enzyme.

Physiology of Bone Marrow.

Histologic structure of red marrow. Nucleated corpuscles, non-nucleated cells. Changes in marrow after hemorrhage.

Physiology of Lymph Gland.

Histologic structure. Origin of lymphocytes.

Society Proceedings

COMING MEETINGS.

Association of American Medical Colleges, Cleveland, March 16-17.
Medical Society of the Missouri Valley, Lincoln, Neb., March 19-20.

NEW YORK ACADEMY OF MEDICINE.

Regular Meeting of the Section on Surgery, held Jan. 10, 1908.

DR. CHARLES H. PECK in the Chair.

Vaginal Drainage of Ureter After Nephrectomy.

DR. A. ERNEST GALLANT presented a woman from whom he had removed a retrocolonic tumor made up of dilated kidney and pelvis. When he exposed the ureteropelvic junction an obstruction was found, due to an S-like bending of the ureter, which was bound down by dense adhesions, completely shutting off the urinary flow. Because of the large size of the kidney no attempt was made to suture it, but gauze packing was placed under it and the urine flowed freely for several days. When the packing was removed the obstruction recurred, and it was deemed advisable to do a nephrectomy, leaving a part of the pelvis and the ureter. An incision was made into the vagina and the ureter was pulled down with the finger, rendering its resection quite easy. The ureter was cut off about an inch from the bladder and sutured in such a way as to expose its lumen in the vaginal vault. Two sutures were inserted through the vaginal wall and the bladder end of the ureter, closing it off. Later the vesicovaginal fistula was closed. A small papilla marked the site of the ureteral implantation.

Tuberculosis of the Kidney.

DR. A. A. BERG presented a patient who had suffered from renal tuberculosis for one year, the disease running the ordinary course. Cystoscopic examination showed large ulcerations of a typical character. The urine contained large quantities of thin pus and tubercle bacilli. The left kidney was secreting sufficient urine to warrant the removal of the diseased kidney. In order to prevent the great amount of bleeding and consequent shock, Dr. Berg did a subcapsular nephrectomy. He cut through the fibrous capsule and shelled out the kidney. This took but five or ten minutes and there was practically no bleeding. A rubber ligature was passed around the pelvis of the kidney and the amputation was performed.

Total Anuria from Obstruction of One Ureter Due to Rotation of Kidney.

DR. BERG also presented this patient, who had complained for years of attacks of kidney colic on the right side. Suddenly she noticed that she voided no urine and, in spite of the use of all the customary methods for stimulating the secretion of the urine, she passed none for seventy-two hours. No obstruction was found in the ureters up to the kidney pelvis No urine came through the ureteral catheters. On exposing the kidney of the right side it was found to be lying in the transverse position, with its pelvis upward and the cortex downward, the ureter passing over its inner pole. The kidney was stone hard and there was some perinephritis. It was easily restored to its normal position. No calculi were present. A drainage tube was introduced into the kidney pelvis, and immediately urine flowed through it in large quantities. The next day she passed urine through the bladder. A gradual but uninterrupted recovery followed.

Unilateral Surgical Kidney Following Urethral Instrumentation.

DR. BERG presented a boy who had suffered five years from incontinence of urine. It was suspected that there was a stone in the bladder and an examination was made with the searcher under strict antiseptic precautions. Nevertheless, in twenty-four hours, he was seized with chills, a rapid and high rise of temperature, and marked prostration. Ten days later the right kidney was large and tender, and there was a large amount of pus in the urine. At operation the right kidney was found to be moderately enlarged and to contain many miliary abscesses. The pelvis was much distended and contained purulent urine. The pelvis of the kidney was drained. With the nephrotomy and drainage the boy improved, but later he became worse and it was decided to resort to further operative interference. The left kidney was of normal size, but surrounded by a perinephritis. Supposing from this that its condition was the same as the other, he did a subcapsular nephrectomy. Practically no shock followed the operation. The boy is now in good physical condition. Numerous abscesses were found to be present in the cortex of the kidney.

Nephrolithiasis in a Horseshoe Kidney.

DR. BERG presented a man who gave the ordinary history of nephrolithiasis. The *x*-ray showed a stone in the cortex of the right kidney. On operation he found a horseshoe kidney, fused at the lower pole. It was impossible to raise the kidney into the wound, and needling the kidney did not reveal the stone. However, the patient subsequently passed a stone, which the manipulation had started down into the pelvis.

Rupture of Kidney.

DR. BERG presented a woman who had a severe rupture of the kidney caused by being run over by an automobile. The kidney was torn obliquely from the upper junction of the pelvis with the cortex to its middle and lower third. A second rent was in a longitudinal direction along the inner border from the pelvis to the lower pole. The kidney was delivered into the wound, the rents repaired, and an uninterrupted recovery took place.

Simple Cyst of Kidney.

DR. GEORGE E. BREWER presented a patient who had symptoms of intermittent hydronephrosis, having experienced a number of attacks of acute pain in the right lumbar region, extending down along the course of the ureter to the groin. These attacks would be accompanied by swelling, and more or less tenderness over the right kidney region. What appeared to be the round extremity of the upper pole of the kidney could be felt. On exposing the kidney, however, this proved to be a large, translucent, thin-walled cyst springing from the anterior surface of the organ, just above the sinus. This was readily enucleated.

Double Vesiculectomy and Vasectomy.

DR. GEORGE E. BREWER presented a negro, 40 years old, who was admitted to the hospital with an abscess of the scrotum, with distinct induration of the epididymis of both sides. The abscess was found to be tuberculous, and due to an extensive tuberculous orchitis of the left side. It was also found that he had extensive tuberculous disease of the other testicle, both vasa deferentia and both seminal vesicles. The prostate was not involved. As the patient only consented to the removal of the diseased area in the scrotum, both testicles were removed with only a small portion of each vas. When he left the hospital two weeks later, he was advised to return for the complete removal of both genital tracts. A transverse incision was made in the perineum and the seminal vesicles were exposed, separated from their beds and freed as far upward as the ureter. An incision was then made over each inguinal ring, the canal freely exposed, and the free extremity of each secured. These ends were separated from the surrounding tissues of the cord by a blunt dissection, and the intra-abdominal portion liberated by a gradual sawing motion. The structures parted somewhere between the ureteral implantation into the bladder and the brim of the pelvis. Both testicles and vasa were then removed, and the wound in the perineum was closed partly, and the abdominal wounds were closed completely. Practically no reaction occurred and an uninterrupted recovery followed.

Acute Septic Infarcts of the Kidney.

DR. GEORGE E. BREWER presented a woman, 26 years old, who seventeen days before admission suffered from acute pain in the right flank, radiating to the groin, associated with chills and high fever. She had daily chills, continuous fever and general prostration. She vomited frequently. The physical examination was negative, except for costovertebral angle

tenderness. The urine from the right kidney contained blood, pus, columnar epithelium, albumin; while the urine from the left kidney contained a faint trace of albumin, very few leucocytes and epithelial cells, and very few red cells. At operation the kidney was found surrounded by a fatty capsule, and showed numerous small infarcts and minute abscesses in the cortex. The capsule was stripped from the organ and the wound closed with a small cigarette drain in place. She has not suffered from renal symptoms since. The pathologist's report showed multiple abscesses in the kidney substance.

Report on Renal and Ureteral Surgery.

DR. GEORGE EMERSON BREWER presented an analysis of 140 operative cases. Of 48 nephrotomies and exploratory incisions, there were 3 cases of new growth, 6 of pyonephrosis, 11 of calculus, 2 of tuberculosis, 14 of septic infarcts, 4 of intermittent hydronephrosis, 2 of pyelonephritis, 2 of polycystic kidney, 1 case of large cortical abscess, and in 5 cases the exploratory incision revealed no lesion. Among the 48 nephrotomies and exploratory incisions there were 9 deaths. Of the 48 nephrectomies there were 6 cases of new growth, 7 of tuberculosis, 18 of pyonephrosis, 17 of calculus, 3 of traumatic rupture, 8 of acute septic infarcts, 3 of hydronephrosis, 2 of ureterovaginal fistula following hysterectomy, and one case each of septic pyelonephritis, severe hemorrhage following nephrotomy, and necrosis of the organ from a twisted pedicle. Among the 48 nephrectomies there were 2 deaths. Among 13 simple decapsulations there were 2 deaths. The 16 nephrorrhaphies were all for the relief of movable kidney. Of the 9 operations on traumatic cases, 7 revealed evidences of injury to the organ, varying from slight capsular rupture to a complete crushing. In two instances a rupture of one or more of the larger branches of the renal vein was present. Of the 9 operations on the lower ureter, in 4 arrested calculi were found, in 2 the ureter was kinked, in 2 the ureter was found to be normal, while in one instance there was an adherent calcified appendix epiploica of the sigmoid, giving rise to an *x*-ray shadow. In his first report of 84 cases, 12, or 14.2 per cent., proved fatal; while in his last report of 56 cases only 2, or 3.7 per cent., terminated fatally as the result of operation. There are 12 cases of new growths in this series; of these 3 were carcinoma, 2 hypernephroma, 2 of solitary cyst, 3 of polycystic kidney, in one case adenoma and in one no accurate diagnosis could be made. One case of carcinoma developed in a man 33 years of age. The kidney was removed. The pathologic diagnosis was adenocarcinoma involving one-half the organ, but not perforating the capsule. He is now well, nearly eight years after the operation. The calculus cases furnished an interesting series, for in reviewing their records it was found that in only 52.6 per cent. of recent cases of suspected calculus did the operation prove the diagnosis correct. The number of cases which in their onset, symptoms and subsequent history led to the belief that stone was present in the kidney or ureter was 57. Of these, stone was found at operation in 32 instances, in 19 no stone was found, but some other definite lesion which furnished a reasonable cause for the existence of the symptoms, while in 6 no lesion was found.

After considering somewhat in detail the subjective and objective symptoms, the results of urinary analysis with reference to hematuria and pyuria, the results of *x*-ray examination and the results of cystoscopy and ureteral catheterization, he said he felt justified in stating that there is no single symptom or sign, or any group of symptoms or signs that is absolutely pathognomonic of renal or ureteral calculus, unless the calculus is in the lower ureter and can be seen or touched by a metal bougie or catheter. The most important factors to be considered in making a diagnosis are pain, tenderness, hematuria, the results of radiography, cystoscopy and ureteral catheterization. Pain and tenderness were present in 100 per cent. of the cases; but it should be remembered that they were present in many cases in which no stone was found. That calculus may and often does exist without pain is evidenced by the statement of Bruce Clark, who reported 24 autopsies on calculous patients, in 13 of whom there had been no subjective symptoms during life. Hematuria was present in 45 per cent. of the stone cases, but it was also present in 41 per cent. of the cases without stone. If all cases are included, the *x*-ray gave positive evidence of stone in 79 per cent. Calculous disease had been noted in both kidneys in five instances. There were 7 intermittent hydronephrosis cases, and in all the afebrile attacks of violent renal neuralgia was present. In all the kidney was at times palpable. In 4 the renal pelvis was found to be enlarged and relaxed; in 3 it appeared normal. One case of complete gangrene of the kidney was observed.

In March, 1906, Dr. Brewer reported 13 cases; since then he has observed 8 or 10 additional cases. Two factors are necessary for the production of this type of renal lesion: 1. A septic focus in the body capable of furnishing a certain number of pathogenic bacteria to the blood current. 2. A diminished resistance of the part of one kidney from trauma, the presence of calculus, an obstructed ureter or a previous septic lesion. The disease not infrequently follows pneumonia, tonsillitis, any of the exanthemata, typhoid fever, a furuncle or possibly obstinate constipation, as the colon bacillus was often found to be the offending organism. With regard to the treatment, the cases should be divided into three distinct groups: 1. The severest type in which nephrectomy is necessary to save life. 2. A milder type which is often relieved by decapsulation, the opening and draining of cortical foci. 3. The mildest type in which no surgical treatment is necessary. The one pathognomic sign present in all cases is a marked unilateral costovertebral tenderness. Nine exploratory ureterotomies have been performed for the removal of a suspected stone. In 4, one or more stones were found, while in 4 the result of the examination was negative. All the 9 cases healed primarily without infection and without leakage of urine.

DISCUSSION.

DR. EUGENE FULLER said that often in hysterical women one obtained a history of pain somewhere in the abdomen, with, perhaps, a slight mobility of the kidney, usually the right. He makes it a rule never to operate in those cases unless they manifest urinary symptoms. In old afebrile patients, with contracted kidneys, little can be done by decapsulation, but much can be done in acute cases.

DR. HOWARD LILIENTHAL reported a case of supposed intra-abdominal sepsis in which at operation he found the right kidney hard as a stone. It was covered by the hardest fatty capsule he had ever encountered. A nephrectomy was done and the patient made a good recovery. With regard to nephropexy, he said that if the movable kidney was caused by trauma, anchoring it will relieve the patient of symptoms. He has seen several cases of crossed pain, i. e., pain on one side and the stone on the other. In cases of hydronephrosis the urine will be extremely poor in urinary salts.

DR. JOHN B. WALKER does not favor packing gauze into the kidney, but around it, to control hemorrhage.

DR. CHARLES H. PECK has seen 4 cases of unilateral septic infarcts of the kidney. In one case he operated and found a kidney similar to the one presented by Dr. Brewer. The other 3 cases were quite mild in type and an operation was unnecessary.

Abscess of Frontal Lobe.

DR. FIELDING L. TAYLOR reported the case of a man, 27 years old, who was struck by a brick above the right eye in May, 1906. One month later there was considerable inflammation about the wound, which had healed. A superficial abscess was opened and pieces of brick and pieces of bone were removed. He suffered from intense headaches, most marked over the occiput. Sept. 12, 1906, he was much emaciated and yawned every few minutes. Pupils were moderately dilated and reacted well. A bilateral optic neuritis was present. There was a slight paresis of the left face without ptosis. The tongue could be protruded only partially and deviated slightly to the left. Patellar reflexes were absent. There was incontinence of urine and feces and persistent vomiting. Two ounces of pus were removed from a cavity about two inches below the surface in the frontal lobe. He returned home and was apparently well except for the eye trouble. Secondary abscesses probably developed, for he died in October, 1907.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Regular Meeting, Dec. 5, 1907.

The President, DR. WILMER KRUSEN, in the Chair.

Retrodeviations of the Uterus.

DR. C. L. BONIFIELD, Cincinnati, Ohio, employs a modification of the Gilliam operation, which he described as follows:

Make the usual incision in the median line. Deal with complications. Have an assistant catch the fascia at a point about an inch and a half above the lower end of the incision and pull it toward the opposite side, seize the skin and underlying fat and retract them. With a sharp knife dissect them loose from the fascia to a point almost above the internal inguinal ring. Make a vertical incision through the fascia; take a curved clamp and with it separate the muscular fibers down to the peritoneum. With two fingers of the other hand, in the abdomen, the clamp is guided under the peritoneum till it passes where the round ligament is seized and pulled out through the opening in the fascia. It is securely sutured to the outer surface of the fascia with chromicized catgut, and the opening closed with the same material. If the ligament has not been seized at the point which will raise the uterus to the desired level, it is easy to change it by the use of another clamp outside the opening of the fascia. Sometimes, in carrying the end of the clamp over the iliac artery, the peritoneum is perforated. If so, no effort is made to get under it again, but the ligament is seized, covered with the peritoneum and pulled through the opening. The peritoneum is then stripped off with dry gauze, to prevent pulling on the bladder as well as to get firm union of the ligament. The other ligament is treated in the same way, taking care that the opening through the fascia is at the same level as its fellow.

DISCUSSION.

DR. E. E. MONTGOMERY thought that in bringing forward the ligament, Dr. Bonifield makes the operation unnecessarily difficult, but agreed with him as to the wisdom of utilizing the portion of the ligament toward the uterus because it is the strongest and the part most likely to maintain the uterus. The portion passing through the inguinal canal is weakest and most prone to become attenuated. The operation he is accustomed to perform is a combination of the Gilliam and Simpson operations, one of which is well known. Operative procedure may be avoided by the use of the pessary in the case of a woman whose uterus is retrodisplaced after confinement merely because the process of involution is not completed. The pessary will retain the uterus in proper position until involution is completed.

DR. BARTON COOK HIRST regards suspension as the easiest, quickest and simplest operation for the correction of displacements, and in his personal experience it has not had the disadvantage of complicating subsequent gestation and child-bearing. In more than 500 suspensions he has not yet seen nor heard of a single serious difficulty in subsequent pregnancies and labor. The only objection to suspension is lack of permanency in results. This is not as grave an objection as it might seem to be, because if the uterus is held in place by suspension for a year or two and the woman bears a child, in the majority of instances the uterus remains in good position subsequently without artificial support. The operation he likes best is the modified Alexander operation, the operation in which the round ligaments are shortened in their natural position by laying open the whole inguinal canal. He claimed that if the round ligament, through a median incision, is grasped by forceps through the abdominal walls at the internal inguinal ring and is pulled out of the abdominal cavity at that point, the uterus should be in better position than if the round ligament is threaded through the abdominal wall above the axis of the inguinal canal and at a point nearer the median line than the internal ring.

DR. WILLIAM E. ASHTON emphasized the fact that no matter what operation is performed for the cure of the condition, the results are often disappointing, unless the body-form is carefully studied and perversions, if they exist, corrected; i. e., the mere correction of the displacement by an operation and the repair of a laceration of the pelvic floor will not result in a permanent cure, if the chest is contracted, the abdominal wall relaxed or a lumbar lordosis absent. It is, therefore, necessary to study the causes of the perverted body form and remedy it either before or subsequent to operating. In many instances he does not operate in chronic cases until the perverted body-form is corrected; while in others when the anatomic perversion is slight or the associated pelvic lesions unimportant, he first remedies the retrodeviation by an operation and then uses suitable means to relieve the structural deficiencies. In a general way the treatment for the perversions of the body-form is carried out as follows: 1. Outdoor exercises which must include those especially directed to develop the capacity of the chest, the strength of the abdominal walls and the anterior projection of the lumbar lordosis. 2. Exercise in the open air. 3. Daily removal of the fecal matter accumulating in the colon. 4. Good hygienic conditions. 5. An abdominal bandage of a non-elastic material or a well-made straight-front corset. The bandage should not reach higher than the umbilicus, and in very thin or relaxed individuals a flat, wedge-shaped pad covering the lower abdomen should be worn beneath it. Usually at the end of six months or a year the abdominal muscles become tense and well developed and the bandage can be discarded.

DR. J. M. BALDY believes that pessaries are in more than one way a positive factor for harm. Operative measures for relief have their place, and the reason men are jumping constantly from one operation to another is due to the fact that these operations are being done for conditions other than displacements per se, conditions which, in reality, require no operation whatever or an entirely different class of procedure. Of course, under these circumstances the most perfect would fail. As to the operation which is the best for retrodeviations. There is but one operation, in his opinion, that fulfills the anatomic and scientific indication even in part—the one done by Webster and himself. This operation brings the round ligaments posterior to the uterus and unites them together back of it and attached to it at about the level of the internal os. In doing this each round ligament perforates the broad ligament at a point directly under each ovarian ligament. The result is that the uterus lies forward in normal position (in the pubis, where it belongs) by gravity and puts strain on the surrounding round ligaments only at such times as the woman strains or assumes certain postures.

DR. CHARLES P. NOBLE believes that the field for the pessary is in the case of married women with retrodisplacements following labor. For uncomplicated cases in the unmarried he suggests the Alexander operation. This operation is particularly adapted to women who have not been subjected to infection.

DR. RICHARD C. NORRIS believes that all of these operations are suspension operations and that sooner or later the uterus will retrovert unless other factors have been corrected. The Alexander operation has been his choice when it can be employed. For the uncomplicated cases, i. e., retrodisplacement in nulliparæ, unassociated with intrapelvic lesions, any and all suspension operations are liable to fail. The condition is usually congenital. Shortening the round ligaments, utilizing the thicker and stronger proximal portions of the round ligaments to suspend the uterus, has given Dr. Norris the most satisfactory results.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundred and Second Annual Meeting, held at Albany, Jan. 27-30, 1908.

(Continued from page 640.)

The Mosquito; Its Relation to Disease and Its Extermination.

DR. ALVAH H. DOTY, Quarantine, S. I., in 1900 began an investigation of the mosquitoes on Staten Island with the intention of securing such information as would lead to their extermination. In the first experiments a space of about one mile square in the center and north end of the island was mapped out. This section was thickly invaded with mosquitoes. In-

numerable breeding places were found and removed, or treated with petroleum oil. Notwithstanding this, the results during the summer of 1900 were not encouraging, as the number of mosquitoes were but slightly diminished. The mosquitoes found and captured were almost all of the "striped-legged" type. But the larvæ brought to the laboratory and placed under wire netting and allowed to propagate never developed the "striped-legged" mosquitoes. It was finally found that the breeding places of the mosquitoes that constituted three-fourths of all those found on Staten Island and along the Atlantic Coast, and known as the *Culex solitans* or as "striped-legged" mosquito, bred only in salt water swamp land. In 1905, at the recommendation of the health department of the city of New York, the government granted an appropriation for the draining of the swamp land along the entire Staten Island coast, and the work was begun in November, 1905. The ditches were made about two feet deep, ten to twelve inches wide, and fifty feet or more apart; these were connected with the main drains, which singly or together discharged into the sea. The swarms of mosquitoes have practically disappeared, screens have been discarded, and meals are served on the verandas of hotels, and the mosquito has ceased to be an annoyance, although a few are still present. Drainage has not only destroyed the breeding places of the mosquito, but it has reclaimed land for building and agricultural purposes. The extermination of the mosquito in swamp land by drainage can only be successfully accomplished and uniform results obtained when the work is carried out under federal, state and municipal control.

Study of Children Fed on the Milk of Tuberculous Cows.

DR. WILLIAM L. STOWELL, New York, said there are 440,000 tuberculous cows in this state. The New York Infants' Hospital is situated on an island of sixty acres, and cares for 2,500 patients. On this island are more than twenty-eight cows. In 1903 two diseased animals were found and killed. In October, 1907, it was found that out of thirty cattle only three failed to respond to the tuberculin test and all were killed. The opsonic index of these hospital children is low and they contract infections easily. There were during this time 4,537 patients, and 180 died; 18 of these died from tuberculosis. This mortality of 10 per cent. in this institution is the same as the mortality for the nation, and yet these children had been fed on tuberculous milk. The milk of tuberculous cows is not so infective as is generally supposed. In tracing the history of the children there was nothing to show that tuberculosis was more common than among the children fed on city milk or on farm milk, or vice versa.

Oxygen in Surgery.

DR. WILLIAM SEAMAN BAINBRIDGE, New York, said that in surgery there is a promising field for oxygen, and reported a number of cases which seemed to prove its therapeutic value. In most cases the gas is not absorbed for thirty-six hours.

DR. J. T. GWATHMEY, New York, said oxygen improves the pulse and has a very good effect on the heart.

Significance of Uterine Bleeding.

DR. JOHN A. SAMPSON, Albany, gave an analysis of 100 cases in which the cause of bleeding had been ascertained by microscopic findings or subsequent history. In 28 cases the bleeding was caused by malignant growths; in 17 cases by polyps; in 14 by threatened or actual abortion; in 13 by myomata; in 11 by hypertrophic thickening of the endometrium; in 6 by laceration of the cervix; in 3 by ectopic pregnancy; in 4 by retained secundines, and in 2 by gonorrheal infection.

Acute Flexures, Angulations of the Sigmoid and Colon.

DR. JAMES P. TUTTLE, New York, said that if the anatomic bendings that served the purpose of retarding the fecal currents became exaggerated, the amount of obstruction is increased. A shortened mesentery may cause a narrowing or obliteration of the intestinal caliber. One important diagnostic point is that when a patient takes an enema he goes to stool several times in order to get rid of it. This is true of acute flexure cases. The treatment is either palliative or radical. Pneumatic inflation with a soft rectal bougie, if persisted in for months, leaving the bougie *in situ*, gives good results. The bougie is introduced through the proctoscope in order to see the aperture, and then it is pushed through. If this treatment fails, the condition is due to fixations or malformations, and the operative method must be varied to suit the case.

Aerotherapy in Certain Toxemias of Childhood.

DR. FREDERICK W. LOUGHRAN, New York, said that this method of treatment lessens the period of acute illness, shortens convalescence and aids in avoiding drugging.

Vascular Crises.

DR. HENRY L. ELSNER, Syracuse, emphasized that arteriosclerosis may exist for many years without a single objective symptom, and that sensory symptoms, paroxysmal in character, are due to vascular spasm. Arteriosclerosis in young subjects is liable to lead to death or to serious complications without delay. There is an abdominal angina and a coronary angina, and they may alternate with each other. The pain in pure angina pectoris may be referred to the abdominal organs.

Causes and Treatment of High Arterial Tension.

DR. LOUIS FAUGERES BISHOP, New York City, stated that high arterial tension is a result of physiologic reaction to pathologic conditions. The excessive demand made on the heart by high arterial tension is the cause of the great increase in the number of persons suffering from heart disease, and the consequent alarming increase in deaths from this cause. He believes that the cause of high arterial tension is found in the wide prevalence of hypertonia vasorum of nervous origin. When this hypertonicity of the blood vessels is resisted by a responsive heart, high blood pressure is caused as long as the heart remains competent. High arterial tension conveys the idea of tenseness of the muscles of the blood vessels, while high blood pressure means that the pressure inside of the vasa vasorum is high. High blood pressure, in the sense of being an important factor in the production of heart disease, is an increased pressure of the blood in the vessels caused by a response of the pressure maintaining mechanism to some demand for such a pressure. In treating high arterial tension, locate the demand for pressure and remove it. It is seldom necessary to interfere directly with the pressure maintaining mechanism; only when that mechanism has become habituated to the maintenance of high blood pressure and responds too freely and too long to the demand, and the pressure may not immediately fall when the demand is removed. In addition to the nervous origin of high arterial tension, we find the cerebral compression of anemia, arteriosclerosis in which there is a definite hardening of the blood vessel, the high tension of defective kidneys. The suspension of respiration, whether voluntary or otherwise, has an immediate action in raising blood pressure, which suggests the question as to whether it is not possible that the high pressure associated with gout and other instances of faulty metabolism may be the result of a reflex similar to that which raises the blood pressure in asphyxia.

In considering the means by which blood pressure can be detected, he believes that the educated touch can detect hypertonicity of the vessels in a manner that can never entirely be replaced by instrumental means, but that it is absolutely impossible, without the fingers, to estimate the degree of tension in cases which are known to be high when they are above 170 mm.; also that low tension cases often appear much lower than they actually prove to be. The educated touch can often decide whether the pulse is normal or not. He experimented for months with all the instruments on the market, and finally invented one for measuring blood pressure. He compared it with all kinds of standard instruments and found its readings correct, and he can read closer with it than with any of the others.

The first step in the treatment is to ascertain the exact condition of the blood, kidneys, metabolism and nervous constitution, including the mentality. Symptoms must be corrected by those drugs which are antagonistic to them and by diet, exercise and environment. The patient must be under treatment long enough for the correction of underlying causes,

and the completion of a physiologic re-education which may overcome the high-tension habit.

DR. A. JACOBI said that arteriosclerosis begins normally at 35 years of age, but it does not begin uniformly. The urine of every man and woman over 40 years of age should be examined, and no urine should be called normal that shows even a slight trace of albumin. He believes in a diet containing less of calcium salts than is generally given. The nitrites are in order and the lactated alkalies and lactic acid.

Diagnosis of Pulmonary Tuberculosis by Tuberculin and Other Tests.

DR. LAWRASON BROWN, Saranac Lake, said it is dangerous to wait until the tubercle bacilli occur in the sputum, for by that time there is ulceration of parts of the lung. The examination of the feces for bacilli is often of value. He gave the practical points in making a physical examination. The patient should be told to breathe out, to cough and then to breathe in; this gives rales that can not be obtained in any other way. The apices should receive more attention. Recourse should be had to the tuberculin test only after other methods of diagnosis have been exhausted. He thinks it has about the same value in tuberculosis that the Widal test has in typhoid fever. The ophthalmic test may prove of great value.

Acute Epidemic Anterior Poliomyelitis Occurring in New York City.

DR. JOSEPH COLLINS and DR. THEODORE H. ROMEISER reported that this epidemic began in July and ended in October, there being as many as 1,200 or 1,500 cases. In this epidemic one case in 10 or 11 made good recovery and about one in 20 recovered absolutely. The anterior horns of the spinal cord were involved, together with other portions of the cord, and even extended into the medulla and pons, the gray matter around the ventricles and into the cortex. Paralysis occurred in the abdominal and facial muscles as well as in the extremities. There were 202 males and 114 females affected. The dangerous age was between 1 and 3. The youngest patient was four days old and the oldest 15. Vomiting, constipation anorexia or thirst occurred in 114 cases, diarrhea in 11 and anuria in 21. In 104 cases one leg was involved; in 59 cases both legs; one arm in 12 cases, and both arms in one. The abdominal muscles were involved in 5 cases. Rest was the early treatment; later, care as to posture. Massage, electricity and large doses of strychnin, intramuscularly, were of value.

County Laboratories and Their Uses.

DR. ORLANDO J. HALLENBECK, Canandaigua, said that in order to prevent the spread of certain infectious and contagious diseases, county laboratories should be provided. In January, 1906, their medical society appointed a committee of three to consider ways and means of establishing a county laboratory. The Ontario Medical Society appointed a similar committee, and these committees formulated a plan to bring about the desired result. Sufficient money was donated by a philanthropic woman in Canandaigua to erect and properly equip the laboratory, provided the state donate sufficient money to employ a pathologist and bacteriologist; for this purpose $1,500 was asked. When it was learned that the board of supervisors had no control in the matter, they interested the senators and assemblymen and had passed an act giving the supervisors this power, and also obtained the required donation. The laboratory is now on a paying basis. They have a first-class pathologist and bacteriologist and, at the end of the first fifteen months they have a balance of $51 in the treasury.

DR. A. JACOBI, New York, thought that if every member of the legislature had a copy of the paper not one could refuse to grant the request. He recommended that a resolution, accompanied by a copy of Dr. Hallenbeck's paper, be sent to every member of the legislature.

Such a resolution was then adopted and sent to the Council.

Intracranial Complications of Middle-Ear Suppuration.

DR. S. J. KOPETZKY, New York City, concluded his remarks as follows: 1. That intracranial complications result from contact of diseased bone with the dura, or they may come about from an invasion of the cranium through the labyrinthine or other anatomic channels. 2. That trauma, either accidental or surgical, may arouse into activity a latent intracranial lesion. 3. That intracranial lesions are generally, although not invariably, the result of an engrafted acute process on a chronic middle ear suppuration, especially if the chronic suppuration is a disease of the bone. 4. That intracranial invasion, when located in the posterior cranial fossa, will first have involved some part of the labyrinthine channels. 5. That involvement of the middle cranial fossa is more amenable to surgical treatment than when the posterior cranial fossa is the seat of the lesion. 6. That the earlier the surgical intervention the better the prospect of an ultimate recovery. 7. That the evacuation of the pus from the posterior cranial fossa without surgical relief of the purulent labyrinth is useless (when the labyrinth is involved). 8. That lumbar puncture as an aid to surgical treatment is of no value. 9. That no case should be considered as inoperable, as sometimes surprisingly good results have been obtained even in such. 10. That the radical mastoid operation should only be done when a positive diagnosis of bone necrosis is made. The mastoid operation should not be undertaken simply to attempt a cure of a persistent purulent otorrhea.

Chronic Middle-Ear Deafness.

DR. W. SOHIER BRYANT, New York, stated that the vast majority of these cases can be improved. Those that can not, are cases of malformation of the middle ear, cases of advanced stapes fixation and cases of extremely advanced otosclerosis. Chronic deafness from middle ear suppuration, either present or past, can always be helped by treatment. The amount of improvement depends on the power of the patient to make repair, and on the power of the physician to substitute parts which have been lost. The aim of treatment should be first, to correct conditions in the Eustachian tube, and then defects of the middle ear. Trophic disturbances are the cause of stapes fixation and these disturbances, as well as their recurrences, must be checked. Suppuration rarely occurs independent of nasopharyngeal disease. If suppuration has begun, the hearing may be preserved by stopping the suppuration and treating the nasopharynx. Where there is deafness, if any suppuration exists, it must be arrested immediately. It is necessary to adjust mechanical appliances to compensate for parts that are lost. Adhesions should be loosened. Twenty-four cases were reported, of which nine showed the three conditions caused by chronic middle-ear deafness treated in nine different ways with success. Thirteen showed various forms of middle-ear catarrh which gave good results, though treated in different ways. His principles of treatment are the removal of obstructions, stimulation and exercise.

Medical Libraries for Smaller Centers.

DR. SMITH BAKER, Utica, stated that in nearly five hundred incorporated villages and all but seven of the cities of New York State there is not a medical reference and circulating library. He showed that where each physician purchased his own periodicals he often duplicated the matter, wasted his money and was, after all, inadequately supplied. He urged that the state society should do what it could to stimulate the organization and growth of medical circulating libraries in all centers, large and small. The idea should be advertised and encouraged. The State Library at Albany should be encouraged to stand in a helpful relation to this enterprise.

An Efficient Operative Procedure in Malignant Disease of the Skin.

DR. SAMUEL SHERWELL, Brooklyn, has used this method for thirty-five years, with good results and comparatively few recurrences. The method consists in thorough, deep and efficient curettage, followed by the application of an escharotic. He prefers a 60 per cent. solution of acid nitrate of mercury. It is necessary to neutralize this by some alkaline medium, as sodium bicarbonate. A scab is thus formed which is allowed to remain until it falls off or is pushed off by the repair process that is going on beneath. The knife may be preferable in pendant or loose portions of the body, as the penis, the ears, the lips, etc., though curettage is preferable even in many of these cases. He does not advocate *x*-ray treatment on account of expense, time and uncertainty of results. One can only,

learn how much acid nitrate to use by experience, and he frequently allows it to remain on the wound for from ten to twenty minutes. If a general anesthetic is necessary, he prefers oxid gas. The final step is to apply the bicarbonate of soda, pressing it down firmly so as to make an adherent scab, which usually comes off in about two or three weeks. Bandages should not be used and the wound should be kept dry. Inflammation usually follows after a day or two, but does not call for the application of any dressing. With this procedure the chances of recurrence are far less than when the knife is employed.

Medicolegal

Privilege Not Waived by Bringing Action for Personal Injuries—What Constitutes Relation of Physician and Patient—Assistants and Other Physicians at Hospital—Hospital Records.

The Supreme Court of Missouri says that in the case of Smart vs. Kansas City the defendant took the broad position that the plaintiff by bringing this suit and asking damages for personal injuries thereby waived the incompetency of her physician and surgeon to testify regarding information acquired from her while attending her in a professional capacity. The Missouri statute regarding confidential communications between physician and patient in so far as applicable to this case is as follows: "The following persons shall be incompetent to testify: . . . Fifth—A physician or surgeon concerning any information which he may have acquired and which information was necessary to enable him to prescribe for such patient as a physician, or do any act for him as a surgeon."—Section 4659 of Revised Statutes of 1899.

The meaning of this section is not veiled in doubt. It disqualifies the physician and surgeon from testifying to any information acquired by them while attending their patients in a professional capacity. The wisdom of such a law is addressed to the legislative branch of the government and not to the judiciary; the latter has to deal with its meaning and not the policy of the statute. That policy is not only well grounded in this state, but is firmly rooted in the jurisprudence of a majority of the states and territories of the Union. For this reason the courts should give the statute full force and effect, and not nullify it on a mere pretext of an implied waiver of its provisions. Such a rule may and doubtless does work a hardship and an injustice in many cases, but that is greatly overshadowed and outweighed by the benefits it brings to the human family at large, and to society in general.

Mr. Wigmore, in his work on Evidence, says: "The whole reason for the privilege is the patient's supposed unwillingness that the ailment should be disclosed to the world at large; hence the bringing of a suit in which the very declaration, and much more, the proof, discloses the ailment to the world at large, is of itself an indication that the supposed repugnancy to disclose does not exist. If the privilege means anything at all in its origin, it means this as a sequel."—IV Wigmore on Evidence, Section 2389.

It seems to the court that this is too narrow a view to take of the statute. If you could limit the inquiry to the particular injury sued for, there might be some apparent force in the contention for a waiver, but such injuries, when inflicted on weak and diseased people, will more than likely aggravate the previous ailments, and rather than disclose such troubles they might prefer to waive the aggravation and limit the recovery of damages to the apparent rather than to the real extent of the injury; and, again, a person might be suffering from some temporary loathsome disease at the time of the injury, and the one might have no effect on the other, or bear no relation whatever thereto. In either of those cases the court is unable to see any good reason for holding that he or she may not place the seal of secrecy on the lips of the physician or surgeon, who, through his confidential relation to the patient, has learned of those ailments, which, if made known, might and often do injuriously affect the business and social standing of such persons in the community where they reside.

If it was not for this wise and beneficent statute, all the diseases to which the human flesh is heir could, and in many cases would, be uncovered and held up to public view, with no corresponding benefits to be derived therefrom, either as a defense to the case or in mitigation of damages.

But independent of what the court has just stated, if the contention of defendant was true, that the mere filing of the petition in court in such cases waives the statutory privilege, then said section 4659 has no force or effect, and is an absolute nullity, because said section begins by stating "the following persons shall be incompetent to testify," etc. If this statute is waived by the mere filing of the suit, then the patient can not avail himself or herself of its provisions, and the disqualification of the physician and surgeon is removed, and they are thereby authorized to disclose all information acquired by them in the examination and treatment of their patients. If no suit is brought by the patient, there could be no occasion for the physician or surgeon disclosing the confidential communications; but the instant one is brought and trial had, and that being the only possible occasion on which the patient could avail himself of the statutory privilege, he is met with the proposition of implied waiver, and, as an inevitable result, the statutory privilege could not be invoked in that case, nor in any other. In other words, as long as suit is not instituted the physician is disqualified by the statute, and in that case there is no express or implied waiver, but under that condition he could not testify because there is no case pending in which to testify; but if suit is instituted, that fact waives the statutory privilege, and he becomes a competent witness, and is authorized to disclose all confidential communications. Such reasoning leads to an absurdity, and totally emasculates the statute.

Coming to a consideration of the competency of two witnesses in the case, the court says that they were assistant physicians and surgeons in the hospital where the plaintiff was taken for treatment on the occasion in controversy, and they assisted in the treatment and amputation of her leg. Under and by virtue of their appointment, contract, or by whatever arrangement they became assistant physicians in that hospital constituted them the physician and surgeon of each and every patient who entered that institution for treatment, and they had no legal or moral right or authority to view, treat or operate on any of them, except by virtue of that appointment or contract. Even their very presence there was traceable to and authorized by that authority and none other.

The intrusion of a physician or surgeon into an institution of the character in question, assuming the authority to observe and examine patients without the permission of those in charge, and by the consent of the patients, would constitute him a trespasser. Such is not tolerated by the law, and would not and should not be permitted by those in charge.

The relation of physician and patient is one of contract, either expressed or implied, and can be created in no other way. In cases of this character, the physician or surgeon in accepting such a position impliedly, at least, agrees to treat such patients as are accepted into the institution, and when he assumes to examine them either by their express agreement, or by their implied or tacit consent, which may be inferred from the act of entrance into the institution, and which will be inferred in the absence of evidence indicating a contrary intention. In either event, whenever the minds of the physician and patient meet by either express or implied contract, the statute places the seal of secrecy on all information acquired by the physician in such professional capacity. The same rule of law applies as fully and effectually to the assistant physician as it does to physician and surgeon-in-chief.

The rule has also been applied to the partner of the attending physician even though the partner never prescribed for the patient.

It makes no difference in principle so far as the physician's disqualification is concerned whether he acquires the confidential communications from a poor or pay patient, in a private residence or hospital, or from a charity patient in a public hospital. The same statute disqualifies an attorney from divulging the confidential communications between himself and his client, and it makes no difference whether the client is poor

or rich, nor whether he lives in a palace or in a poorhouse—the same rule applies in both cases. The poor and needy are as much protected by the law as the rich and strong. Certainly the statute makes no distinction or exception, and the court does not feel justified to write such exceptions into the statute.

It necessarily followed from what has been stated that neither of the two physicians was competent to testify to any information he acquired while acting in his professional capacity.

The court also holds that the same principle of privileged secrecy applied to the testimony of a third physician, who had some kind of arrangement by which he had access to the hospital, and the right to examine patients, select such as he wished and take them into an operating room for use in the clinics which he had authority to hold in the institution in which the plaintiff was confined. It appeared that he approached the plaintiff while in bed, pulled up the cover, looked at her leg, and advised her physician to have it amputated at that time, because he thought she had either sarcoma or tuberculosis, and whichever it was, in his judgment, it would have to be amputated. The court says that it can not concur with the defendant in its contention that the relation of physician and patient never existed between the plaintiff and physician simply because he never treated her, nor ever intended to do so. The record showed that he was rightfully in the hospital, was exercising authority over the patients, examining their persons, advising treatment, and removing patients from their wards to the operating room for clinical purposes; and all this with the knowledge and consent of those in charge of the institution. If he was not rightfully there, then he was not only a trespasser in the institution, but was guilty of the crime of assault and battery by approaching the plaintiff's bed, where she was lying, and pulling up the covers and exposing her person and making the examination. The court will not presume he was guilty of a crime, because the law presumes every one innocent until he is proved guilty beyond a reasonable doubt. Besides all this there was no evidence in this record tending to show but that the plaintiff thought and believed he was one of the attachés of the institution, and, as such, had the authority to do what he was doing there.

It is not necessary in order to create the relation of physician and patient that he should actually treat the patient. If he makes an examination of the patient, with her knowledge and consent, she believing that the examination is being made for the purpose of treating her, then the relation is created by implication, and it is wholly immaterial what the secret object or purpose of the physician was in making it; and, in the absence of evidence to the contrary, the plaintiff had the perfect right to assume and rely on the assumption that the physicians who were apparently in charge of the hospital were rightfully there, and, as such, had the authority to examine and prescribe for her, and this one would not afterwards be heard to say he was not connected with the institution and had no authority to examine or treat her. If such a thing as that could be done, then the privilege accorded the patient could be taken from her by trick or fraud.

Nor does the court consider the records of the hospital were admissible in evidence over the plaintiff's objection. It says that the diagnosis of the case was made by an examination of the patient and by interrogating her regarding the complaint. This is necessary to be known by the physician in order that he may prescribe the proper treatment, and when he once acquires that information the law declares it to be confidential communications, and disqualifies the physician from divulging the same on the witness stand. Mr. Elliott, in his work on Evidence, in the discussion of such statutes, says: "It seems to be conceded by both opinions that hospital physicians, who attend such persons at the hospital, could not testify as to what they learned while so attending him."—I Elliott on Evidence, Section 635. This is undoubtedly the rule as announced by all the authorities, and, that being so, it seems that it must follow as a natural sequence that when the physician subsequently copies that privileged communication on the record of the hospital, it still remains privileged. If that is not true, then the law which prevents the hospital physician from testifying to such matters could be violated both in letter and spirit, and the statute nullified, by the physician copying into the record all the information acquired by him from his patient, and then offer or permit the record to be offered in evidence containing the diagnosis, and thereby accomplish, by indirection, that which is expressly prohibited in a direct manner.

The mere fact that the ordinance of the city requires such a record to be kept is no reason on earth why the statute regarding privileged communications should be violated. That record is required to be kept for the benefit of the institution, and not for the benefit of outside litigants. It is not the subject or purpose of the ordinance to repeal the statute in question, but even if it were it would be null and void, because in conflict with the statute. The object of the statute is to guarantee privileged communications between all patients and their physicians, and it is wholly immaterial whether they are in or out of hospitals. The only case where the patient is denied the protection of this statute is where his or her case falls under the rule of necessity.

Contract of Health Officer for Services in Epidemic Is Invalid.

The Appellate Court of Indiana, Division No. 1, says, on the appeal of City of Greenfield vs. Black, that the latter-named party, a resident of the city of Greenfield, and secretary of the board of health thereof, sued said city for compensation for services alleged to have been rendered by virtue of a contract with said city during an epidemic of smallpox in the year 1902. Among others things, he averred that there was no hospital or other place where persons affected could be treated; that for the protection of the citizens of the city, and for the preservation of the lives and health of those effected, it was very urgent that persons so affected should have proper medical treatment; that the ordinary physicians of said city would not undertake such treatment, and that persons affected were wholly without medical aid unless the city authorities provided it; that the plaintiff was secretary of the board of health of said city, but not required to take on himself the treatment of such persons; that the mayor and common council requested him to attend on such persons; that, by reason of the request, he did so treat such persons for a period of 71 days; that his services were worth $20 per day; that no part of said sum has been paid and the persons treated were unable to pay the same. Judgment was asked in the sum of $2,000. There was a trial by jury and a verdict for the plaintiff in the sum of $850. The city appealed and got the judgment reversed, with order for a new trial.

One of the reasons assigned for a new trial was that the verdict was contrary to law. It was shown by the answer, and by the proof as well, that the plaintiff was at and during all the time the services were rendered for which this action was brought the health officer of the city of Greenfield. By section 52 of the Indiana act for the incorporation of cities it is provided that "no member of the common council or other officer of such city shall, either directly or indirectly, be a party to or in any manner interested in any contract or agreement with such city for any matter, cause or thing by which any liability or indebtedness is in any way or manner created against such city, and if any contract should be made in contravention of the foregoing provisions, the same shall be null and void." There could be no doubt that the plaintiff was an officer of the city within the meaning of the statute as quoted. The statute not only prohibits the making of contracts such as that in issue, but it provides that, if made, the same shall be void. It applies to all contracts, both express and implied.

Nor does the court agree with the contention that there was such an emergency in this case that it created an exception to the statutory prohibition. It says that whenever a duty devolves on the authorities to supply medical treatment and attention, as in the cases where the public welfare must be protected or indigent patients are unable to procure such treatment or attention, the authorities are empowered to employ such medical assistance. But, in order to justify the employment of a physician, who is within the positive inhibition of a statute, there must exist such an actual emergency that it would be manifestly unjust to delay action in order to comply with the strict requirements of such statute. And the right

to recovery, under such cirumstances, is not to be extended beyond the necessities of the actual emergency.

Taking the evidence as a whole, it failed to establish such a state of facts as to the existence of an emergency for the employment of the plaintiff, which met the requirements, to justify a recovery.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

February 15.

1 *What Shall We Do With Far Advanced Cancer of the Large Bowel? R. C. Coffey, Portland, Ore.
2 *Sanitation of the Canal Zone. W. C. Gorgas, Ancon, Canal Zone.
3 *A Method of Milk Production. C. E. North, New York.
4 Importance of Correct Diagnosis in Diseases of the Eye Is the Chief Reason Why Opticians Should Not Prescribe Glasses. A. E. Davis, New York.
5 *Phthisis in Outdoor and Indoor Life and in Isolated and Cosmopolitan Races. N. B. Jenkins, New York.

1. Abstracted in THE JOURNAL, Aug. 24, 1907, page 713.

2. The principal points in this article were taken up in a similar article by this author in THE JOURNAL, July 6, 1907, page 6.

3. **Milk Production.**—North summarizes his paper practically as follows: The use of sterile, covered pails and sterile milk cans by the ordinary farmer will immensely reduce the number of bacteria in his milk, even though no other sanitary precautions are taken. The dairy house, where washing and sterilizing of utensils and cooling and bottling of milk are done, may be at a distance of several miles from the cow stable without materially increasing the bacterial count, provided the milk is delivered at the dairy house within one hour after milking. Five cents a quart to the farmer will pay him for his trouble of milking in a sanitary way and for making two deliveries a day. In many instances it would compensate him for keeping his herd free from tuberculosis. The functions of the creamery should be increased, so that it becomes a washing and sterilizing plant for all the milking pails and milk cans of all the farmers contributing milk to it. Covered milk cans or "pailcans" should be substituted for the wide-open milking pails now in use. The creamery should do all the cooling and bottling of milk. The cooling should be taken out of the hands of the farmer. Let the milk dealer pay the farmer 5 cents a quart for such milk, and let the public pay the milk dealer 10 cents a quart for milk delivered in the city. High prices of certified milk are due to the expense at the dairy house. Concentration of operations at the creamery for a large number of farmers would be business economy, and would likewise eliminate many sources of contamination.

5. **Phthisis.**—Jenkins says that while outdoor life may cure tuberculosis in the individual it may lead to susceptibility to tuberculosis in the race. North American Indians and other outdoor races when exposed to civilization are unable to resist the disease. On the other hand, while indoor life may cause tuberculosis in the individual, it may tend to immunize the race. Jews and other indoor races have a marked resistance to consumption. Indoor races in centuries of environment favorable to tuberculosis have probably acquired special resistance. Outdoor races in their natural environment probably escape tuberculosis without special resistance, which indoor people require in order to survive contact with the disease in indoor life. Race isolation common in outdoor peoples may be the chief cause of racial tuberculosis. The unhappy mental changes resulting from changed environment undoubtedly play a part in tuberculosis in foreigners and in Indians and other wild or semicivilized races, as they do in animals in captivity.

Boston Medical and Surgical Journal.

February 13.

6 *Control of the Lymphatics in Infections of the Extremities. H. L. Burrell, Boston.
7 *Value of Malachite Green Media in Differentiating Typhoid and Colon Bacilli, with Description of a New Method for Isolating Typhoid Bacilli from Feces. F. W. Peabody and J. H. Pratt, Boston.
8 Six Cases of Acute Perforating Ulcer of Duodenum. E. A. Codman, Boston.
9 *The Optometrist and His Colleges. J. C. Bossidy, Boston.

6. Abstracted in THE JOURNAL, Nov. 30, 1907, page 1869.

7. **Malachite Green.**—Peabody and Pratt discuss the differentiating methods for typhoid and colon bacilli and also describe a new method for isolating typhoid bacilli from feces. The general results of their examinations lead them to hold the malachite green media in high esteem. Their action is not absolutely specific, for other bacteria likely to be confused with the typhoid bacillus, as well as the colon bacillus which is inhibited by it, flourish in them. Also malachite green somewhat checks development of the typhoid bacillus. Still the malachite green method is a great step forward. It is not only more economical in time and money, but has yielded better results in the authors' laboratory.

9. This article will be noted in the department of Medical Economics.

New York Medical Journal.

February 15.

10 Points Regarding Urethroplastic Operations, with Special Reference to the Dislocation Method. C. Beck, New York.
11 Squamous-Celled Carcinomata of the Esophagus. W. T. Cummins, Philadelphia.
12 *Removal of Adenoids. M. J. Ballin, New York.
13 Psychasthenia. J. Collins, New York.
14 *Management of Febrile Conditions After Abortion and Labor. A. Brothers, New York.
15 *Vaccination in the Far East. C. S. Braddock, Haddonfield, N. J.
16 Diseases of the Breathing Apparatus Which Affect the Breath: the Breath as an Aid in the Diagnosis of These and Other Diseases. F. E. Klotz, Lanark, Canada.
17 Treatment of Cold in the Head. H. H. Pelton, New York.
18 Teaching of Dermatology in Medical Schools. C. A. Kinch, New York.

12. **Adenoids.**—Practically the same operation for the removal of adenoids was described by Dr. J. F. Barnhill in his paper read before the Mississippi Valley Medical Association, an abstract of which appeared in THE JOURNAL, Oct. 26, 1907, page 1468.

14. **Postpartum Fever.**—Brothers discusses the various forms of febrile condition that follow delivery or abortion in the hands of midwives and those practitioners who have not profited by the present knowledge of the essentials of aseptic midwifery. These febrile conditions he divides into four groups: Fever due to (1) retention of infected placental débris or of blood clots; (2) pelvic inflammation; (3) bacteriemia (septicemia; (4) general peritonitis. The first group usually begins with chills and rise of temperature between the third and sixth days. There is little or no pain, the discharge, if any is malodorous. He describes the conditions graphically. In the first group the débris may be cleared out by the finger, or the blunt curette may be necessary, and a saline intrauterine irrigation completes the operation. He regularly administers ergot. If the fever does not drop in a reasonable period after treatment it is due either to pelvic inflammation or septicemia, salpingitis, oöphoritis, pelviperitonitis, parametritis. These conditions are a contraindication to curettage or intrauterine irrigation, save exceptionally and at the hands of experts. They may all end in spontaneous absorption, but sometimes suppuration supervenes. Brothers has not been able to convince himself that the usually low grade fever with correspondingly slow pulse rate follows any particular type. Chills are infrequent and mild, and the face is flushed and hopeful. Usually localized pain and an exudation mass clinch the diagnosis. "As a rule, these patients recover under local abdominal refrigeration, prolonged rest in bed and hot vaginal douches at short intervals." Silver ointments or blisters above Poupart's ligament and the pubes can do no harm. The blood should be examined, as pus has often been found when the fever had dropped to normal, but the exudate would not disappear. An increased leucocytosis, between 10,000 and 20,000, and a polynuclear count exceeding 75 or 80 per cent., induces Brothers to advise operation with a view to finding a pus focus. When "pointing" can be waited for, that is the best thing, as an incision at the most dependent spot offers the easiest method, but sometimes the pus burrows upward

beneath the peritoneum, necessitating a laparotomy. The author insists on leaving patients with pelvic exudates alone. He is convinced that many will do as well under prolonged rest in bed and ice locally as under any other measures. Bacteriemia occurring before delivery is very ominous. From the start the pulse usually has a rate of 120 or more, but in nervous women the value of the pulse count holds good only when taken during sleep. Chills are repeated; temperature is fluctuating; there is restlessness usually, but not always delirium; lochial discharge is diminished or absent, and is odorless; usually there is complete absence of abdominal pain. The treatment of the future will probably call for the earliest possible hysterectomy, but with streptococci or staphylococci in the blood Brothers holds that the patient's chances are slim any way. The results of Wright's treatment are indecisive at present. Antistreptococcic serum has been disappointing in Brothers' hands. The gonococcus type of the disease is usually mild and terminates in recovery under prolonged rest in bed. Pus tubes, of course, call for removal. Phlegmasia alba dolens calls for prolonged rest in bed; no rubbings or ointments, and elevation of the limb. Clinically, the cases with general peritonitis can be classed by themselves. Simple intestinal paresis with abdominal distension must not be mistaken for peritonitis. A positive diagnosis, with the patient in fair condition, he thinks is best met by laparotomy. The Alonzo Clark opium treatment he has no use for except for euthanasia. The liberal use of ice bags to the abdomen will often cause complete recovery or result in the localization of pus. Care must be taken, however, not to produce sloughing.

15. **Vaccination in the Far East.**—On returning to America after twenty years in the Far East, Braddock was utterly astonished to read articles in papers denying the protective power of vaccination against smallpox and to learn of so much opposition from parents and of the activity of the antivaccinationists. He wishes he could show them some of the results of vaccination in Siam and the Malay Peninsula. He attempts to describe them. One province with a present population of only 600,000 has lost 100,000 from smallpox alone in the last thirty years. The epidemic of 1903 was responsible for a death rate of 10,000, and these epidemics recur every few years. Dr. Braddock and Dr. Adamson, in 1903, after nine months of long failure and disheartenment, succeeded in making good vaccine. A few weeks after the first successful vaccine was made an epidemic broke out in Tatchin. In thirty days, before they were notified, 145 children died of the disease, which means about 500 cases. A fast steam launch was dispatched, and in a few days 4,000 people had been vaccinated. The epidemic was instantly stopped. Not a person was attacked after the vaccinating, and those who were then incubating the disease had it in a very mild form. Tatchin has never known smallpox since.

Lancet-Clinic, Cincinnati.

February 8.

19 *Mechanism of Spontaneous Version. W. Gillespie, Cincinnati.
20 *The Fallacy of Osteopathy. D. O. Weeks, Marion, Ohio.
21 Dietetic Treatment for Constipation. F. L. Rattermann, Cincinnati.

February 15.

22 *Psychoses of Pneumonia. C. J. Aldrich, Cleveland, Ohio.
23 History of Physiology. F. H. Lamb, Cincinnati.
24 Sleep. J. Burke, Manitowoc, Wis.

19. **Spontaneous Version.**—Gillespie discusses thoroughly the subject of obstetric spontaneous version. In his opinion the spontaneous version of premature or unduly flexible children is due to excessive flexibility of the cervical and upper dorsal vertebræ. The child, under these circumstances, passes through the complete process of turning without presenting a shoulder at the superior strait, because the fetal limbs are folded within the circle formed by the excessively flexed child, and the back presents to the uterine surface during the complete evolution. He has never seen this form of version described, but has seen it frequently in late abortions, and has been accustomed to utilize the mechanical facts thus gained in hastening the termination of such cases.

20. **Abstracted in THE JOURNAL, Sept. 28, 1907, page 1139.**

22. **Psychoses of Pneumonia.**—Aldrich says that the pneumonic psychoses may manifest themselves at any one of five periods in the course of the disease. He describes them in detail under the subheads, prodromal delirium, initial delirium, pyrexial delirium, postcritical delirium, collapse (exhaustion) delirium, and postpneumonic psychoses.

Journal of Infectious Diseases, Chicago.

January.

25 *A Study of Typhoid Opsonins. C. P. Clark and J. P. Simonds, Chicago.
26 *Opsonic Index in Diphtheria. R. Tunnicliff, Chicago.
27 *Splenomegaly and Banti's Disease; Report of Case. J. P. Simonds, Chicago.
28 *The Similarity Between Blood Platelets and Certain Hematozoa. L. D. Swingle, Omaha, Neb.
29 *Qualitative Changes in the Third Serum Component. H. W. Manwaring, Bloomington, Ind.
30 *Factors in Hemolysis. Id.
31 *Significance of Leucocytes and Streptococci in Production of High-Grade Milk. M. E. Pennington and E. L. Roberts, Philadelphia.
32 *Review of Anaphylaxis With Especial Reference to Immunity. M. J. Rosenau and J. F. Anderson, Washington, D. C.

25. **Typhoid Opsonins.**—Clark and Simonds find that after heating normal human and rabbit serum to from 56 to 58 C., there persists in these sera in appreciable degree the power to promote phagocytosis of typhoid and paratyphoid bacilli by washed human leucocytes. As the result of spontaneous infection, as well as of artificial inoculation with these bacilli, this power of the serum may undergo profound modifications and may be augmented in very high degrees. The exact determination of this opsonic power with respect to typhoid bacilli in the course of typhoid fever was found, on account of inconstancy and variations in the induced and spontaneous phagocytability of the typhoid bacillus, to present many difficulties which demand much further study. With respect to paratyphoid bacilli, the variations of the opsonic power of the serum of typhoid-fever patients are more easily determined and appear to follow a fairly typical course, for the opsonic index, as determined by comparison of heated normal and typhoid sera, is high early in the disease when the patients ordinarily come under observation and approaches normal more or less gradually as convalescence sets in. In rabbits injected with either dead typhoid bacilli or dead paratyphoid bacilli there develop in each case immune opsonic substances for both these organisms; these substances, however, appear to be largely specific, no matter whether produced in response to the injection of the one or the other of the bacteria.

26. **Opsonic Index in Diphtheria.**—Contrary to Wright and others, Tunnicliff shows that the diphtheria bacillus is sensible to the opsonic action of human and rabbit blood serum. It was found that in diphtheria the opsonic index for diphtheria bacilli is generally below normal at the onset of the disease. As the membrane disappears and the symptoms subside, the index rises considerably, returning to normal in from two to nine days. In the majority of cases there is a rise in the streptococco-opsonic index in diphtheria, but the indexes for diphtheria bacilli and streptococci rarely correspond. The injection of dead diphtheria bacilli in suitable number into rabbits is followed by a marked rise in the index. By diluting the normal and the immune serum until phagocytosis practically ceases, the comparative opsonic power of the sera on diphtheria bacilli can be measured. The curves representing the opsonic power determined in this way correspond almost exactly with the curves of the opsonic indexes estimated by Wright's method, thus showing that Wright's method, after all, is not altogether unreliable. The suggestion is made that the injection of dead diphtheria bacilli may prove of some service in ridding the throat of bacilli, in the case of chronic carriers and convalescents, as the experiments show that in rabbits such injections are harmless and at the same time cause decided increase in the opsonic power of the blood on diphtheria bacilli.

27. **Splenomegaly.**—Simonds summarizes his study of splenomegaly and Banti's disease as follows: "While there may be some just question whether or not all the cases here collected are properly classified, there can be no doubt that there are

two distinct conditions associated with an idiopathic anemia and enlargement of the spleen. One begins usually in patients over 20 years of age; is characterized clinically by chloroanemia, leucopenia, enlargement of the spleen, and frequently by gastrointestinal hemorrhages, ascites, pigmentation of the skin, rarely by jaundice; and anatomically shows fibrous hyperplasia of the spleen with, frequently, cirrhosis of the liver, and varicose veins in the lower esophagus and cardia. The other occurs most often in young people and shows a family tendency; manifests itself clinically by an anemia with low index, absence of leucocytosis, enlargement of the spleen, a prolonged course, hemorrhages from the nose and gums or under the skin and mucous membranes, and, less frequently, by jaundice and brownish pigmentation of the skin; and is characterized anatomically by diffuse proliferation of endothelium in the spleen and sometimes in the liver and retroperitoneal lymph glands."

28. **Blood Platelets and Hematozoa.**—Swingle shows that blood platelets in various culture media and in the stomach of ticks may develop flagella and move about, manifesting so marked a resemblance in form, size and structure to contained hematozoa that great care must be taken to differentiate between flagellated platelets and the parasites. Certain investigators have published results that in view of Swingle's demonstration can be accepted only with some reserve.

29 and 30. **Hemolysis.**—Manwaring's careful work indicates well the great complexities in the way of the investigator of problems presented by the sera of immunized animals.

31. **Milk.**—Pennington and Roberts find that a correlation of the finding of streptococci or of many leucocytes in milk by the laboratory, with the physical condition of the cows in a herd maintained for the production of a very clean milk, would seem to show that in many cases there is a connection between such findings and the condition of the cow, both in relation to specific udder and to systemic affections. Such parallelism seems to obtain for the end of the lactation period, for the beginning of an udder inflammation, for an attack of cowpox, and, possibly, for chemotactic conditions due to high feeding of animals constitutionally unable to transform the increased feed into increased milk.

32. This subject was discussed editorially in THE JOURNAL, Feb. 8, 1908, p. 456.

Annals of Surgery, Philadelphia.

January.

33 *Relation of Mesocolic Band to Gastroenterostomy. W. J. Mayo, Rochester, Minn.
34 *Intracranial Abscess Due to the Typhoid Bacillus. F. B. Gurd and T. B. Nelles, Montreal, Canada.
35 Isolated Fracture of Great Tuberosity of Humerus. H. L. Taylor, New York.
36 Diagnosis of Renal Tuberculosis. R. P. Campbell, Montreal, Canada.
37 Excision of the Whole Left Lobe of the Liver for Sarcoma. G. Torrance, Birmingham, Ala.
38 Splenectomy for Lacerated Spleen After Blood Transfusion. A. H. Bogart, Brooklyn, N. Y.
39 Splenectomy for Gunshot Wound of Spleen. E. H. Fiske, Brooklyn, N. Y.
40 Splenectomy in Banti's Disease. G. Torrance, Birmingham, Ala.
41 Splenectomy for Carcinoma. M. A. Smith, Boston.
42 *Gangrene of Appendix in a Three Weeks' Old Infant. C. H. Dixon, St. Louis.
43 Primary Sarcoma of the Prostate. C. A. Powers, Denver.
44 *Systematic Operation for Penile Hypospadias and Other Defects of the Urethral Floor. G. F. Lydston, Chicago.
45 *Simple Fracture of the Carpal Scaphoid. W. A. Downes, New York.
46 *Treatment of Fracture of the Neck of the Femur in One Hundred and Twelve Cases. J. B. Walker, New York.
47 Open Method in the Treatment of Pott's Fracture of the Leg. H. H. Heath and C. D. Selby, Toledo, Ohio.
48 *Punctured Fracture of the Skull. G. G. Ross, Philadelphia.

33. **Mesocolic Band and Gastroenterostomy.**—Mayo discusses abnormally long mesocolic bands and their relation to the technic of gastroenterostomy.

34. **Brain Abscess Due to Typhoid Bacillus.**—Gurd and Nelles report a case in which a patient who had received a blow some two weeks before he came to hospital with typhoid fever, showed localized brain symptoms. Examination and treatment showed that the blow had caused a blood clot, which the typhoid bacillus infected, thus developing an abscess. Whether the bacillus was present in the blood at the time of injury or whether the typhoid developed subsequently it is impossible to say.

42. **Gangrenous Appendix in a Three Weeks Old Infant.**—Dixon reports a case of a baby 24 days old, which he operated on for strangulated right inguinal hernia, with eight centimeters of ileum and an adherent gangrenous appendix in the sac. The appendix was removed, the gut returned, and a radical operation performed. The baby did well. This, he says, is the youngest patient with appendix trouble on record.

44. **Penile Hypospadias.**—Lydston reports a case of penile hypospadias in which he applied the technic as previously prescribed by him for the restoration of the urethra in various forms. His technic exactly reverses that of Carl Beck, which he considers likely in most cases to make a bad matter worse, especially as regards the sexual function. He claims as an advantage that in no case could the patient be worse off after the operation, since, even in the event of complete failure no interference to subsequent operation results.

45. **Fracture of the Scaphoid.**—Downes cites several cases of simple fracture of the scaphoid, and remarks that these cases are more apt to be overlooked than the complicated type. The two most characteristic symptoms are tenderness on pressure with the wrist slightly flexed and adducted just below and to the dorsal side of styloid, with extreme pain on extension. Contact of fractured surfaces and immobilization of the wrist for from three to four weeks will bring about union. Dislocation or considerable uncorrectible displacement calls for removal of one or both fragments without delay.

46. **Fracture of the Neck of the Femur.**—Walker's conclusions are as follows: Fracture of the neck of the femur occurs under 50 years of age more frequently than was formerly believed. Any injury to the hip followed by disability should suggest the possibility of a fracture of the neck, and requires an expert examination, aided by *x*-ray photograph. Reduction of the deformity, with complete immobilization of the fracture during the period of repair, by means of a plaster bandage in all suitable cases, is advised. This is to be followed by early gymnastic movements, active rather than passive. All weight-bearing on the fracture is to be avoided for from three to four months.

48. **Punctured Fracture of Skull.**—Ross reports the case of a man who gave a history of having been struck four or five days previously about the right eye with an umbrella. Careful examination showed no evidence of fracture: no scalp cuts or bruises, no discharge from nares or ear; no mastoid edema. The tongue was protruded in a median line without tremor; there was neither facial paralysis nor cyanosis of mucous membrane or finger tips; the right eye showed slight injection of bulbar conjunctiva, but without evidence of injury; light reaction, accommodation and pupils were normal. The patient became stuporous and showed severe constitutional symptoms. Two days later the right pupil was more dilated than the left. There was no evidence of paralysis, but the intermittent temperature, the leucocytosis and the chilly feeling suggested cerebral abscess; *x*-rays suggested doubtfully a fissured fracture of the vertical plate of the frontal bone. Complete left-sided hemiplegia was noticed soon after. The skull was opened over the most prominent part of the right parietal eminence and a quantity of dark, foul-smelling pus was evacuated. The patient improved somewhat after operation; on the second day the pupils became equal and reacting to light, and the paralysis of the left arm became less profound. He answered questions in a rational way. He suddenly stopped breathing, however, became deeply cyanosed and died. At postmortem no external evidences of injury to the face and head were observed, but a tract was found leading from the nose through the antrum of Highmore to the orbital cavity, thence to the middle fossa of the skull, furnishing an avenue of infection direct from the nasal cavity to the temporosphenoidal lobe of the brain, representing the course taken by the umbrella point. A straight probe could traverse the entire tract without obstruction. Ross calls attention to the

wisdom of nose examination in any case of traumatism about the head when the history is at all doubtful.

Philippine Journal of Science, Manila.

October, 1907.

49 Kubisagari or Vertige Paralysant. K. Miura, Tokyo, Japan.
50 *Investigations Carried on by the Biologic Laboratory in Relation to the Suppression of the Recent Cholera Outbreak in Manila. R. P. Strong, Manila.
51 *Treponema Pertenuis Castellani of Yaws and Experimental Production of the Disease in Monkeys. P. M. Ashburn and C. F. Craig, Manila.
52 *Histologic Study of Yaws. H. T. Marshall, Manila.

50. **Cholera in Manila.**—Strong describes the methods employed in bacteriologic diagnosis, the preparation and furnishing of cholera immune sera for diagnosis, the prophylactic inoculations and the efficiency thereof. The advantages of this prophylactic lie in the almost entire absence of local reaction, which renders it possible to inject from fifteen to thirty times as much as would be practical if either living or killed bacteria were inoculated; a higher immunity is thus obtained, and the prophylactic may be stored in flasks and preserves its properties for at least a year. The great disadvantage is the extreme care that is necessary in each step of the manufacture. The statistics are not sufficient to demonstrate conclusively its protective power, but after inoculating one-sixth of the population of a village, 1,078 in number, when cholera appeared a few months later, out of 122 persons stricken 121 were among the non-inoculated. In 3 other villages only 3 out of 2,706 persons inoculated were stricken, but there has not been sufficient cholera in these localities to justify conclusions. In Bilibid Prison, 1,838, or over half the inmates, were inoculated. Out of 24 cases of cholera only 4 were among the inoculated. Strong then reviews recent work on the subject of protective inoculations against cholera, discussing the local reaction following inoculation, the size of the dose and the standardization of the prophylactic, the immunizing power and virulence of the organism and the serum treatment of cholera.

51. **The Micro-Organism of Yaws.**—Ashburn and Craig, as the result of their clinical and experimental observations, conclude, among other things, that *Treponema pertenuis* is the cause of yaws, and that it is constantly present in the serum from yaws lesions; that its morphologic variations are due to artificial deformities produced during the preparation of the serum; that the *Treponema pertenuis* and *Treponema pallidum* can be differentiated by the results obtained from the inoculation of monkeys; that yaws and syphilis are distinct diseases and that *Treponema pertenuis* can be demonstrated in sections of yaws papillomata by the Levaditi method.

52. **Yaws.**—Marshall has examined histologically the tissues from the cases in the preceding paper, and from a study of these specimens concludes that we are dealing with a primary degenerative change resembling colliquative necrosis, affecting the epithelial structure, and caused by spirochetes, which are very abundant in the necrotic material, at least at some stage of the disease. The degeneration leads to ulcer formation. Following the degeneration there is irregular new formation of epithelium in the form of downgrowths which often degenerate. Accompanying these changes vascular dilatation, edema and leucocytic infiltration occur in the corium, with a minor degree of new formation of capillaries and connective tissue. There is no endarteritis, neither are there any other changes suggestive of syphilis. The majority of the infiltrating cells are polymorphonuclears at an early stage of the lesion, while mononuclears, many of which are of the plasma cell type, are almost equally abundant. In the tissue from the human being the plasma cells outnumber the polymorphonuclears. Polymorphonuclear eosinophiles are abundant and have a peculiar distribution. The changes are essentially the same in lesions from monkeys and human beings.

Texas State Journal of Medicine, Fort Worth.

January.

53 *Functional Relation of the Parathyroids to the Thyroid. W. S. Carter, Galveston.
54 Surgical Anatomy of the Parathyroids in Man. W. Keiller, Galveston.
55 *Medical Expert Testimony. P. A. Martin, Graham.
56 Pneumococcic Mastoiditis in the Recent Influenza Epidemic at Dallas. H. B. Decherd, Dallas.

53. **The Parathyroids.**—Carter investigates the relation of the parathyroids to the thyroids experimentally and concludes that the parathyroids are more essential to life than the thyroids. When both sets of bodies are excised the acute nervous symptoms are probably due to toxemia resulting from disturbance of proteid metabolism. On the other hand, the removal of both thyroids in the dog, whether at one or two operations, produces no symptoms, even after two or three months, provided the external parathyroids remain. The subsequent removal of one or two remaining parathyroids is promptly followed by tetany and death in ten days. As a practical lesson, Carter urges that in operating on the thyroid every effort should be made to save the parathyroids, and suggests that probably many of the fatal results from operations on the thyroid have really been due to removal of the parathyroid or to the cutting off of their blood supply.

55. **Medical Expert Testimony.**—Martin suggests that the expert be made an officer of the court, appointed to try the special issue; that specialists in the particular line should be chosen by the judge trying the case and that the decision by the experts be final.

Colorado Medicine, Denver.

January.

57 *Periarthritis of the Shoulder. G. B. Packard, Denver.
58 Bone Cavities and Interspaces and Their Treatment. H. G. Wetherill, Denver.
59 Relation of Vaccine Therapy to Surgery. B. H. Matthews, Denver.
60 Results in Cases of Amputation of the Shoulder Joint. C. A. Powers, Denver.

57. **Periarthritis of the Shoulder.**—Packard considers certain common though obscure lesions of the shoulder, characterized by pain and impairment of function and restriction of abduction and rotation, so that the arm can not be put behind the neck or the small of the back. Various diagnostic names have been given, but the uniformity of the symptoms leads Packard to suspect that there is a constant lesion giving rise to this symptom-complex, which he calls periarthritis of the shoulder. He discusses its relation to an inflammatory condition of the subdeltoid bursa, and believes that in some instances the important lesion is a tenosynovitis of the biceps tendon. Fixation and cauterization will generally relieve pain and subsequent disability, while massage and manipulation before the relief of pain and tenderness favor permanent pain and disability. In the chronic stage manipulation under ether, with subsequent abduction and external rotation of humerus, should be used.

Ohio State Medical Journal, Columbus.

January.

61 *Surgical Pathology of Tuberculous Cervical Glands. H. J. Whitacre, Cincinnati.
62 *Surgical Treatment of Tuberculous Lymph Glands. C. A. Sawyer, Cleveland.
63 *Medical Treatment of Tuberculous Cervical Glands. J. P. Hamann, Cleveland.
64 *Roentgen Treatment of Tuberculous Cervical Glands. W. C. Hill, Cleveland.
65 *Radical Operation for Removal of Tuberculous Cervical Glands. J. H. Jacobson, Toledo.
66 Case of Chronic Partial Intestinal Obstruction Due to Adenocarcinoma of Cecum with Autopsy Findings. C. D. Slagle, Centerville.
67 *Etiology of Psychoneuroses, Commonly Called Traumatic Neurasthenia and Traumatic Hysteria. C. J. Aldrich, Cleveland.
68 *Report of the Ohio League for the Suppression of Fraudulent Advertising. D. R. Silver, Sidney.
69 Tri-Chlor Acetic Acid in the Treatment of Diseases of the Nose. E. H. Porter, Tiffin.

February.

70 Clinical Notes on Acute Dilatation of the Stomach, or Arterio mesenteric Ileus. W. B. Laffer, Cleveland.
71 Clinical Study of Five Hundred Gastric Cases. J. D. Dunham, Columbus.
72 *Surgery of the Stomach Based on One Hundred and Four Personal Cases. G. W. Crile, Cleveland.
73 Need of State Organization of Eye, Ear, Nose and Throat Practitioners. M. D. Stevenson, Akron, Ohio.
74 Lupus Erythematosus: Its Differentiation from Eczema and Other Chemically Allied Affections. M. L. Heidingsfeld, Cincinnati.
75 *The Fallacy of Osteopathy. D. O. Weeks, Marion.

61. **Tuberculous Glands.**—Whitacre discusses the pathology of tuberculous glands of the neck, and says that while occasionally tuberculous infection of the cervical glands is of

hematogenous origin, secondary to a focus elsewhere, the infection is usually transmitted through the lymphatics from a peripheral port of entry. It is established that the bacilli may penetrate the intact mucous membrane and produce glandular tuberculosis without attendant disease at the point of passage. Portals of entry are carious teeth, the tonsils, abrasions of the scalp or mouth, eczema of the scalp and pediculosis. In most cases a predisposition may be assumed. The clinical picture may vary considerably. In most cases the anatomic lesion differs in no way from that usually presented by tuberculous infection. Recurrence will follow an incomplete operation which removes only those glands affected. An infected gland may continue for a long time as a tuberculous nodule with a caseous center or the caseation may become complete. A mixed infection occurs in a fairly large percentage of cases. He cites a case of his own in which a caseating gland ruptured into the trachea with the formation of a gaseous tumor in the neck, followed promptly by pulmonary involvement. He considers the evidence at variance with the view that tuberculosis of the glands of the neck serves to protect against further invasion; rather it forms a strong argument for radical removal of such glands in this region.

62. **Id.**—Hamann describes the technic of extirpation, and gives the following contraindications: In young children, because under medicinal and hygienic treatment subsidence often takes place; in anemic run-down individuals with marked pulmonary involvement; in patients with tuberculous glands in different parts of the body.

63. **Id.**—Sawyer considers the medical treatment in which the aim is to favor and increase the cellular vigor of the patient, by rest during fever, open-air living, diet, removal of adenoids and diseased tonsils, care of the mucous membrane of the mouth. Drugs have a subordinate place. Iron iodid and the hypophosphites have been most satisfactory in his hands. Creosote is sometimes of use. Tuberculin has not yet found general favor. Local applications and injections are of doubtful value.

64. **Id.**—Hill says that suppurating and large discrete glands should be removed by operation supplemented by *x*-ray therapy, which renders recurrence much less frequent. There is no pain. It is not necessary for the patient to remain in a hospital; he can be in the open air and follow out the proper hygienic measures which are so important. There is no danger of scarring when the treatment is administered by a competent operator. The results in certain classes of cases are better than results from operation.

65. **Id.**—Jacobson describes the anatomy and technic of the radical operation as regards the incision, injury to nerves, especially the facial and pneumogastric, and to the internal jugular vein and also the pleura. The records of operation justify the following assurances: (a) In favorable cases: Safety of operation (many operators reporting more than 100 cases without mortality); a scar which is hardly to be seen; probable confinement to bed two or three days; the wearing of a bandage or dressing from one and a half to three weeks; freedom from recurrence in about 75 per cent., ultimate recovery in about 90 per cent. of the cases. (b) In less favorable cases: Safety of operation; less disfigurement from scars than discharging sinuses will cause; freedom from recurrence in from 50 to 55 per cent. and ultimate cure in from 70 to 75 per cent. of the cases.

67. **Traumatic Psychoneuroses.**—Aldrich means by trauma injury to either the body or the psyche. He cites Hippocrates as saying that no injury to the head should be despised. It is a well-recognized law that continued attention causes intensification of sensation in an organ. This has a general, as well as an individual, significance, since a latent psychic condition underlies many of the results of such injuries, such a condition as is produced chiefly by the incessant and startling prominence given by the press to accidents, etc. We live in an age whose strenuousness leads to the frequent occurrence of accident, and whose rapidity of communication makes every one cognizant of much disaster that in previous times was confined to the knowledge of those in the vicinity of its occurrence. This induces a latent fear, which is a most powerful emotion that may effect even organic changes. Charcot's experiments showed that suggestion proved effective in proportion as it was in accordance with propensity. A hypnotized thief would steal when a hypnotized honest man would not. So that all that is needed sometimes to convert a possible result of injury into an actual one is suggestion. Railway employés (except engineers who are under constant strain of responsibility, and who, moreover, see many narrow escapes that others do not) are less liable to develop psychoneuroses than passengers because they are always in training, so to speak.

68. Abstracted in THE JOURNAL, Sept. 28, 1907, page 1139.

72. Abstracted in THE JOURNAL, Sept. 21, 1907, page 1050.

75. Published in the *Lancet-Clinic*, Feb. 8, 1908, and an abstract appeared in Society Proceedings, THE JOURNAL, Sept. 28, 1907, page 1139.

Interstate Medical Journal, St. Louis.

January.

76 *Annual Review of Medical Progress Number.

76. This issue is entirely taken up with a systematized review of medical literature for the preceding year. The review is more than a mere compilation; it is an effort to set forth, by comparison, departures or diversions, to readjust or correct old principles and corroborate or sustain established procedures.

New York State Journal of Medicine.

January.

77 Tetanus Following Surgical Operations. F. Flaherty, Syracuse, N. Y.
78 *Cesarean Section. W. B. Reid, Rome.
79 *Solution of the Milk Problem. J. Johnston, Bradford, Pa.
80 General Consideration of Radiotherapy. G. M. Mackee, New York.
81 Advantages of a Country Water Shed. C. G. Rossman, Hudson.
82 Neurasthenia or Nervous Exhaustion. J. D. Bonnar, Buffalo.
83 Recent Advances in Medicine. D. Rochester, Buffalo.
84 Address of President of Fifth District Branch of Medical Society of the State of New York. N. Jacobson, Syracuse.

78. **Cesarean Section.**—Reid describes clearly the various steps of his personal technic, and emphasizes the importance of judgment and caution on the part of the operator.

79. **The Milk Problem.**—Johnston points out that the milk business is really two businesses—dairying and distributing. Dairying is a charming, natural, wholesome occupation, with a history interwoven with the traditions of all civilized peoples. It has high ideals, good financial prospects, and offers possibilities to tempt the scholarly as well as the practical man. Distribution of milk is a commercial matter entirely. The sort of knowledge employed in the distribution consists mostly of tricks. The average citizen thinks that he knows good milk, a natural food, when he gets it, but he overlooks the fact that milk is not taken in an exactly natural manner, and that modern methods of handling it call for his better acquaintance with them. The public has for some time taken on itself the regulation of the business, but only, or at least chiefly, from the purse point of view—full milk, full measure and a minimum legally fixed to adulteration or deterioration. As the milkman sees the law it does not prevent dishonesty, but merely limits it. A legal standard composition for milk must necessarily be made low in fat, so as not to hit any innocent man. Before enactment of laws, the milkman was forced to skim down timidly, with one eye on his customers and the other on his competitors. Now all may skim with easy consciences, for when the law says to a dealer that he must not furnish anything worse than this or he will be prosecuted, it says in effect that if he furnishes anything better than what is required he is a fool. The author considers that protection by law works badly every way. It is impracticable to examine in detail as delivered, and when examined in bulk there is such a wide opportunity for subsequent changes that the work of the inspector becomes useless. The public must take a fresh start in controlling the milk business. Johnston considers that the only solution of the milk

problem would be for each community to declare the distribution of milk a public service and employ its own servants. A cooperative company might be started in any city by anyone at any time. No particular breed of cows has yet been evolved for the spcial duty of providing milk; but the best milk for household use is not that which is richest in cream. Native or grade cows are to be preferred to thoroughbreds for all-round richness, flavor, and even balance of nutritive values.

Northwestern Lancet, Minneapolis.

January 1.

85 Sanatorium Treatment of Pulmonary Tuberculosis. H. L. Taylor, St. Paul.
86 *Strangulated Hernia. C. C. Allison, Omaha.
87 Unusual Case of Inguinal Hernia. W. F. Keller, Sioux Falls, S. D.
88 *Treatment of Inebriety. H. Sneve, St. Paul.
89 Hernia. H. J. Rock, Aberdeen, S. D.

January 15.

90 Surgical Therapeutics of Gastric Ulcer. J. T. Rogers, St. Paul.
91 Diagnosis of Organic Diseases of the Stomach. T. W. Stumm, St. Paul.
92 *Autointoxication as a Factor in Disease. W. J. Maytum, Alexandria, S.D.
93 Indications for Technic of Hyperemia Work of Professor Bier. J. H. Beaty, St. Cloud, Minn.

86. Strangulated Hernia.—Allison considers the two stage operations in advanced cases of strangulated hernia safer than the primary complete operation, and later anastomosis safer than the end-to-end operation. The postoperative dangers of ileus are many, and in strangulated hernia, which differs in this from the usual obstructive symptoms of appendicitis, the hope of escaping them by delay is groundless.

88. Inebriety.—Sneve comments on Minnesota's plan to care for the slaves of alcohol and narcotic drugs. He discusses the questions of psychology, heredity, alcohol, the classification of inebriates, the prognosis and the treatment, and expresses skepticism as to the possibility of inheriting a taste for liquor.

92. Autointoxication.—Maytum discusses this subject clearly in its relation to disease. Nearly all cases of melancholia and neurasthenia he considers to be forms of autotoxemia. Elimination is the secret treatment. He advises stopping all food and using saline laxatives and intestinal antiseptics, with charcoal to absorb the gases. Restriction of food, however, is the sheet anchor.

American Journal of Surgery, New York.

January.

94 Hip Disease. J. Graham, Durham, N. C.
95 Operation of Grafting the Rabbit's Cornea on the Human Eye. F. Valk, New York.
96 *An Inguinal Colostomy Permitting Control of Intestinal Contents. L. F. Garrigues, New York.
97 Cases of Ovarian Tumors. A. Hall, Mt. Vernon, Ill.
98 Cases of Kidney and Urethral Stone. G. K. Swinburne, New York.
99 Appendicitis, Ventral Hernia, Old Dislocation of the Shoulder. Tuberculous Adenitis of the Neck. R. T. Morris, New York.
100 Restoration by Primary Operation of a Nose Mutilated by a Horse's Kick; Support of Depressed Septum by Suspensory Suture. W. M. Brickner, New York.

96. Inguinal Colostomy.—Garrigues has applied the gastrostomy operation of Ssabanijew-Frank to inguinal colostomy with a view to obviating the disagreeable effects of leakage of feces, fluid and gases. He has performed the operation once, and while the patient lived only three days after operation (it was a case of cancerous masses), it seemed to answer thoroughly the purpose for which it had been devised. A three-inch incision is made through the left linea semilunaris at the level of the superior iliac spine, into the peritoneal cavity, and a loop of the colon is pulled out. A second incision, about two inches long, is made about two or three inches outside the first, and the subcutaneous tissue and the skin are undermined between the two incisions; the exact position of the second incision depends somewhat on the length of the mesentery, which should be put gently on the stretch. A running suture is inserted between the peritoneum and deep fascia on the one side and the muscular layers of the intestines on the other, at the base of the loop of intestine that has been pulled out. The intestine is now drawn through from the first to the second incision underneath the bridge of skin and subcutaneous tissue. A running suture is inserted, uniting the skin and the end of the loop of intestine to the second incision. The skin and subcutaneous tissue of the first incision are now sutured. The intestine is opened in the second incision if the case is an urgent one, but if possible twenty-four hours should be allowed to elapse before the intestinal incision is made.

Journal of Cutaneous Diseases, New York.

February.

102 *Tropical Diseases of the Skin. H. Radcliffe-Crocker, London.
103 *Relation of the Navy to the Study of Tropical Diseases. P. M. Rixey, U. S. Navy.
104 *Skin Diseases in the Negro. H. Fox, New York.

102 and 103. Abstracted in THE JOURNAL, Oct. 12, 1907, pages 1304 and 1305.

104. Abstracted in THE JOURNAL, Sept. 28, 1907, page 1138.

Archives of Pediatrics, New York.

January.

105 Three Cases Illustrative of the Occurrence of Typhoid in the First Year of Life. J. P. C. Griffith, Philadelphia.
106 Case of Hemothorax in Infant Five Months Old: Aspiration, Recovery. W. P. Northrup, New York.
107 Case of Myxedema. A. M. Davis, Germantown, Pa.
108 Cases of Subcutaneous Emphysema Following Exploratory Puncture of the Chest. J. C. Gittings, Philadelphia.
109 Tetanus Neonatorum Complicated by Pneumonia. R. O. Clock, Philadelphia.
110 Examination of Incised Tonsils. Case of Tuberculous Infection by a Bacillus of the Bovine Type. A. F. Hess, New York.
111 Epidemic Anterior Poliomyelitis in Philadelphia, with an Analysis of Cases Occurring in the Past Four and a Quarter Years at the Children's Hospital. R. S. McCombs, Philadelphia.
112 Indications For and Against Removing Adenoids, and Method of Operating. S. W. Thurber, New York.
113 Ocular Symptoms and Diseases Accompanying Adenoids. C. H. May, New York.
114 Adenectomy During Acute Middle-Ear Disease. P. D. Kerrison, New York.

Archives of Ophthalmology, New York.

January.

115 Case of Recurrent Palsy of the Third Nerve. C. E. Finlay, Havana, Cuba.
116 Extraction of Cataract in Capsule. Report of a Visit to Major Henry Smith in Jullunder, India. A. Knapp.
117 Case of Fleeting Paralysis of Some Ocular Muscles. J. S. Wyler, Cincinnati.
118 Optic Neuritis After Disease of Posterior Ethmoidal Cells. A. Knapp.
119 Anatomic Basis of Blindness Following Orbital Abscess. M. Bartels, Marburg, Germany.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

February 1.

1 *Inherited Syphilis. R. C. Lucas.
2 Unequal Distribution of Filariasis in the Tropics. G. C. Low.
3 Case of Severe Ecthyma from Which the Diphtheria Bacillus Has Been Isolated. A. Eddowes and J. G. Hare.
4 *Value of Cytodiagnosis in Practical Medicine. J. E. H. Sawyer.
5 Acid Intoxication Following Ethyl-Chlorid Anesthesia. H. H. B. Cunningham.
6 Development of Secondary Nodules in Suture Scars After Operations for Removal of Cancer. C. W. M. Moullin.
7 Two Cases of Uretero-Pyeloplasty. A. H. Burgess.
8 *Severe Spasmodic Contraction of Finger Cured by Stretching Median Nerve. J. Adams.

1. Inherited Syphilis.—Lucas first discusses the three terms, congenital, hereditary and inherited, as applied to this form of disease. Congenital and hereditary he dismisses as not being universally true, preferring the term inherited, as implying only something derived from the parents which is detachable, like a fortune or misfortune. He describes the *Spirochæta pallida*, which is now generally accepted as the cause of the disease, and the discovery of which now puts inheritance from the father alone entirely out of court, as well as the possibility of the infection of a mother by her syphilitic fetus; for it seems impossible that a highly motile organism exceeding in length the diameter of an ovum, could possibly penetrate and multiply in it without destroying it. Therefore he lays it down as an axiom that inheritance is invariably through the syphilized mother, which conclusion is supported by Colles' law. When virulent the spirochetes penetrate the chorion or placenta and occasion miscarriages, macerated

fetuses or premature births; when the virus is attenuated the placenta protects the developing fetus, and infection takes place only through the umbilical vein on the separation of the placenta, thus explaining the appearance of secondary symptoms in the infant from two weeks to three months after birth. In these cases the separation of the placenta is the first stage, and corresponds to the chancre of acquired syphilis. This is equally in accordance with Colles' law, which has hitherto been explained on the theory that during gestation the mother becomes mildly syphilized through her syphilitic child inheriting from the father. With regard to transmission by milk he reproduces an important case, reported by him in 1881, in which a mother having borne a healthy child in December, was inoculated by her husband at the subsequent Easter with syphilis, but continued to nurse her child for three months after infection before any treatment was begun. Yet for two years, so long as the case was under Lucas' observation, the child remained in perfect health. He concludes that the milk of a syphilitic woman, when received into the alimentary tract of an infant, need not convey any infection to the child. As to transmission by semen, it is certain that the spirochete can not be carried by the spermatozoon, though it is possible, but not proved, that it may be present in the fluid portion and become absorbed through the uterus after the disintegration of its mucous lining at a menstrual period. The question of transmission to the third generation he considers doubtful, and reports a case in which both parents showed marked evidences of inherited specific disease. Their condition was so characteristic that he sent for their child, then two months old; it showed no signs of syphilis during the period that it was under his observation, notwithstanding this double presumable inheritance.

Lucas discusses infant mortality, the relation of various organs, as well as nervous changes, etc., to syphilis, and insists on the importance of weighing carefully all the evidence before determining that a particular affection is due to inherited syphilis. Every conceivable defect has been ascribed to it, and the term parasyphilis only adds to the confusion.

4. **Cytodiagnosis.**—Sawyer describes the method and discusses the value of determining the nature of cells from serous effusions or cerebrospinal fluid in diagnosis. His conclusions are: 1, A large number of small lymphocytes, ranging in Sawyer's series from 59 to 100 per cent., in cerebrospinal, pleuritic or ascitic fluid, indicates that the exudation is due to an irritative process and not to an acute inflammatory condition—effusions of tuberculous origin, for instance. The absence of the tubercle bacillus in the film from pleuritic effusion would not exclude the tuberculous origin of the disease, but the absence of lymphocytosis would. The presence of an approximately equal number of small lymphocytes and polymorphonuclears in a pleuritic fluid may cause difficulty, but if the lymphocytes are numerous the condition is probably tuberculous, the number of polymorphonuclear cells probably being due to extremely acute onset or to secondary infection. High percentage of small lymphocytes in the cerebrospinal fluid of a child probably means tuberculous meningitis, but it is also found in locomotor ataxia and any syphilitic disease of the meninges. Sawyer suggests, without having had an opportunity to verify it, that cerebral tumors may be similarly diagnosticated, lymphocytosis suggesting a tuberculous or syphilitic tumor as distinguished from other forms. 2. An excess of polymorphonuclear cells in any serous fluid, ranging from 64 to 97 per cent., points to its being of an acute inflammatory origin. These cells can only have been derived from the blood, by diapedesis through the vessel walls, so that effusions of acute inflammatory origin contain a large percentage of polymorphonuclears. 3. A large percentage of endothelial cells indicates that the effusion is mechanical in origin. The highest count made was 98.8 per cent. By mechanical effusion is meant one occurring in serous cavities as part of general edema or in the peritoneal cavity from portal obstruction. 4. Effusions due to malignant disease can readily be diagnosed by cytologic methods alone, but when such condition is suspected the predominance of endothelial cells would greatly support that view.

8. **Contraction of Finger.**—Adams reports the case of a woman who in 1902, while sewing, pricked the thumb of her left hand. Severe inflammatory complications ensued, which finally resulted in an amputation in the forearm, necessitated by a spreading septic infection. Without further injury, in 1905, the middle finger of the right hand began to contract. After a complete failure of all external measures, combined with internal treatment for gout, rheumatism, syphilis, etc., this finger was removed at the metacarpophalangeal joint. Six months later, the ring finger began to contract, so that it could not be opened by any effort on the patient's part, and by the physican only by causing extreme pain; on being released, the finger returned at once to its vicious position like a strong spring set free. It was not abnormal in any external condition. Hesitating to amputate a second finger, Adams adopted the suggestion of stretching the median nerve. Separating it from its bed at the junction of the middle and lower third of the upper arm, he took it up with forefinger and thumb, stretched the distal portion forcibly for four or five minutes, and then the proximal portion. Under the anesthetic the finger could be readily extended. A palmar splint for three weeks, with passive exercise, and then only at night for a while, resulted in a cure, which was complete when the patient was seen twelve months later. A curious fact was that the subsequent numbness was only in the ring and little fingers, supplied by the ulnar nerve, there being no numbness in the thumb and forefinger. Adams says the etiology of the case is obscure, and he can only state its negative side. It was not Dupuytren's contraction or an osteoarthritic condition, neither was it inflammation, nor a sequel of inflammation, not gout or rheumatism, or an example of neuromimesis. The tissues and joints of the finger he amputated were all healthy. The contraction was not organic, but was a true spasm, and became more violent the more one attempted to oppose it.

British Medical Journal, London.

February 1.

9 Medical Aspects of Life Insurance. J. Barr.
10 Second Report on Clinical Experiences with Spinal Analgesia, with Second Series of 100 Cases. A. E. Barker.
11 *Inherited Syphilis. R. C. Lucas.
12 *The Medical Inspector of Schools as a Psychiatrist. T. S. Clouston.
13 *Critical Solution Point of Urine; A New Physicochemical Method of Examination. W. R. G. Atkins.

11. See Abstract No. 1.

12. **The Medical Inspector of Schools.**—Clouston thinks that while all other hygienic necessities in regard to school children seem to be engaging attention, there is some danger that the brain, the dominating organ of all, may be neglected. The investigation of the mental condition is of the utmost importance, and while the data are not so exact and easily applicable as those of chemistry and bacteriology, there are relevant facts and data which can be used for the public benefit. The study of environment is important, and the medical officer of health should take into consideration the social customs of the community as affecting the mental condition of the children. In the case of the tramp, for instance, his clothes, dirt, and power of carrying infection are at present the principal objects of investigation, but his mental condition is the real danger to society. The well-known bodily stigmata of degeneration indicate mental potentialities and risks, in many cases, rather than mental actualities. It must not be forgotten that heredity, even of the worst kind, is, at some period of life of the child, chiefly a potentiality. The highest psychologic faculty is that of inhibition or control. The studies and efforts of parents, teachers, school inspectors and psychologists will be needed to teach precisely the laws through which inhibition is developed in the young brain and the principles that should guide us in educating that great faculty on right lines. The medical school inspector of the future will need the help of most of the specialties of medicine, but more especially of psychiatry.

13. **Critical Solution Point of Urine.**—Atkins outlines the critical solution point theory, and describes a new physicochemical method of examination. His conclusions are as follows: The examination of urine by the critical solution point method gives a reliable measure of the functional activity of

the kidney producing it, and may be employed in all cases in which cryoscopy can be used. The difficulty of obtaining a clear solution with blood or blood serum has so far prevented the application of this method to their examination. The rise in critical solution point should not be less than 8° C. for the urine from a healthy kidney; ordinarily the rise is from 11° to 16° C. Each determination can be made in ten minutes, without weighing and without any special or costly apparatus. Only a small quantity of urine is required, not more than 5 c.cm. for each determination; when specimens have to be collected by catheterization of the ureters this is a saving of time and occasions less inconvenience.

Medical Press and Circular, London.

January 29.

14 *Modern Theories of Diet in Their Relation to Practice. R. Hutchison.
15 Hemorrhage into Pons Varolii as the Immediate Cause of Death in Eclampsia of Pregnancy. N. Carver and J. S. Fairbairn.
16 Treatment of Lateral Sclerosis. W. Murrell.
17 Deductions from One Hundred Consecutive Operations for Appendicitis. J. W. Dowden.
18 The Woman of the Future from the Gynecologist's Point of View. E. O. Croft.

14. Diet.—Hutchison discusses at length modern theories of diet in relation to practice. Among his own personal conclusions are, that climate has less influence than is commonly supposed; that the variations in metabolic activity of cells in different people may be due to variations in the activity of the thyroid; that the physiologists' views, based on a mere calculation of how much nitrogenous material people in a state of balance consume in twenty-four hours, are unsound, whereas the real indication that a person is eating too much is continued increase in weight; that a too low body weight renders people liable to certain diseases, especially tuberculosis, and that the risk of taking too little protein may be greater than that of overworking the excretory organs with too much; that the claims of contradictory systems to cure the same conditions are probably due to the fact that it does not matter whether one eliminates the "protein sparers" or cuts out the protein, leaving little for combustion, the result being the same in the end; and that the best method is "an intelligent omnivorism, eating everything which comes handy, but not too much of it." People who can not do that are not normal but pathologic.

Practitioner, London.

February.

19 Causes and Operative Treatment of Umbilical and Ventral Hernia. A. E. Barker.
20 *Mode of Production of Presystolic Murmur in Mitral Stenosis. E. H. Colbeck.
21 Infantile Paralysis. G. Rankin.
22 Radical Treatment of Cancer of the Prostate. J. W. T. Walker.
23 *Metastatic Affection of Pancreas in Mumps. W. Edgecombe.
24 Ophthalmia Neonatorum (to be continued). S. Mayou.
25 Contracted White Kidney. W. M. Robson.
26 Review of Tropical Diseases. R. T. Hewlett.
27 Review of Diseases of the Blood and Blood-forming Organs. H. B. Shaw.
28 *Treatment of Chilblains. F. Gardiner.
29 Statistical Inquiry into Cases of Cancer Occurring at Twickenham from 1882 to 1902. J. R. Leeson.
30 Chorea and a Convenient and Trustworthy Method of Administering Arsenic Therein. J. G. Sharp.

20. The Presystolic Murmur.—Colbeck thinks the presystolic mitral bruit due to vibrations excited in the large anterior flap of the valve by the impact of the blood stream during the auricular systole. The valve is suspended obliquely in front and to the right of the smaller posterior flap, and is attached at its base to the fibrocartilaginous ring, being thus more or less fixed and permanent. Normally, the course of the blood stream from auricle to the ventricle is directly in the perpendicular axis of the ventricle, so that should anything interfere with the falling back of the anterior flap of the mitral valve this segment would lie directly in the path of the blood stream. Interference with the diastolic expansion of the left posterior portion of the auriculoventricular orifice, or the falling back of the posterior flap, would have the same result of throwing the blood stream on to the anterior flap. Again, the essential feature of the bruit is its rough, vibratory crescendo quality, whereas other murmurs lack the vibratory quality of the presystolic and have a diminuendo quality. The properties of the presystolic bruit suggest the vibration of a thin membrane. The increase in intensity is due to the increase in force and intensity of the impinging blood stream from auricle to ventricle. The changeability is explained by the variation in tension of the anterior flap or in the force and rapidity of the blood stream. The disappearance of the murmur is perhaps sometimes due to total destruction of the flap, at others to failure of the *vis a tergo* consequent on the establishment of tricuspid incompetence. The restricted area of the murmur is explained by the attachment of the base of the flap to the fibrous portion of the ventricular septum, along which structure it would naturally be conveyed, and which comes nearest to the surface, just internal to and above the apex beat. This also explains the presystolic thrill. The occasional presystolic murmur of aortic incompetence is due to affection of the posterior coronary segment of the aortic valve, which would direct the regurgitant stream on to the flap of the mitral. The rare occurrence of a tricuspid presystolic bruit is accounted for by the difference in the arrangement of the valvular flaps.

23. Parotiditis and Pancreatin.—Edgecombe says that it has long been known that the pancreas may be involved in the general infection of mumps. He has recently observed an epidemic of mumps in a boys' school (33 cases). Five patients presented symptoms pointing to a metastatic affection of the pancreas. These cases he reports. The features common to all were: Rapid subsidence of the parotid swelling, vomiting, pain and tenderness in the epigastrium, and constipation. Fever occurred in all but one. In two there was a distinct swelling of the pancreas. In all but one acetone and diacetic acid were found in the urine; glycosuria was not observed. In the last case urine taken on the ninth day from the onset of the mumps was reported as showing a well-marked pancreatic reaction, and also a well-marked deposit of calcium oxalate crystals.

28. Chilblains.—Gardiner thinks that no case need go beyond the erythematous stage. The two chief etiologic points are that the lesions occur at the extremities of the circulation and that they are started by cold, and more especially by rapid transition from heat to cold. Mild cases of Raynaud's disease must be looked out for. Chills should be avoided; tepid water should be used to wash in; there should be no sitting over the fire, and particularly no going directly therefrom into a cold outside atmosphere. Foot and hand wear must be carefully chosen. Massage is helpful, especially as a prophylactic. Calcium chlorid in 15 grain doses daily, or tincture of strophanthus with liquor trinitri may be given internally. Locally two drugs stand out pre-eminent, ichthyol and formalin; the former, 19 to 20 per cent. in lanolin, the latter as an ointment, in 10 to 50 per cent. strength. There will be much smarting in the presence of abrasion. Simple lanolin or petrolatum should be substituted after a few days for a short time. Treatment may be started with ichthyol and finished with lanolin. Iodin, tincture or as 2 per cent. iodin in collodion, silver nitrate solution, or camphorated spirit may be used. Galvanism, faradism and *x*-rays have all been used with benefit, the last in ten-minute doses with a hard tube and 0.5 milliamperes in the secondary circuit; when continued thrice weekly, stopping short of reaction, it causes eventual disappearance. In the ulcerating stage Gardiner recommends: Ammoniated mercury, grains v (0.32); ichthyol, min. x (0.16); starch powder, powdered zinc oxid, of each 2 drams (8.); petrolatum, ℥ss (15.). If all local means, coupled with general treatment, fail, lupus erythematosus should be suspected.

Journal of Tropical Medicine and Hygiene, London.

January 15.

31 Diseases Found in the Gilbert and Ellice Islands. A. Robertson.
32 Inexpensive Warm Stage for Microscope. O. T. Logan.

Clinical Journal, London.

January 29.

33 Aspiration of Portion of Tooth into a Bronchus. W. Murrell.
34 Surgical Diseases of Children. A. H. Tubby.
35 Intestinal Perforation of Typhoid. L. McGavin.

Bulletin de l'Académie de Médecine, Paris.

January 14, LXXII, No. 2, pp. 33-80.

36 *Idiopathic Hereditary Tremor. R. Le Clerc and Raymond.
37 Work of Native Physicians in Madagascar, 1906. (Assistance médicale indigène.) Kermorgant.
38 *Importance of Ocular Reaction to Tuberculin in the General Campaign Against Tuberculosis. (Ophthalmo-diagnostic de la tuberculose et son rôle dans la défense sociale anti-tuberculeuse.) A. Calmette. Id. Delorme, in No. 3.

January 21, No. 3, pp. 81-108.

39 *Present Status of Cholera. (Positions actuelles du choléra.) A. Chantemesse and F. Borel.
40 Medicolegal Expert Service in France. (L'expertise médicale criminelle.) Thoinot and Lacassagne.

36. Idiopathic Hereditary Tremor.—Le Clerc has encountered three cases and has collected seventy-six authentic ones from the literature, discarding fourteen on record as belonging to other categories of tremor. He has been studying the tremor with the aid of Ughetti's "tromograph" and finds that the tremor shows a constant rate of nine or ten movements to the second. Treatment should aim to avoid causes liable to exaggerate the motor disturbance, especially stimulants. Psychic treatment has given good results in his hands.

38. Sociologic Importance of the Ocular Diagnosis of Tuberculosis.—Calmette calls attention to the great advantages of being able to differentiate tuberculosis in its incipiency, as is now possible, he says, "with the entirely reljable and harmless reaction to ocular instillation of tuberculin." It shows that newly born infants of tuberculous mothers are not infected, as a rule. None of the infants of 12 tuberculous mothers recently delivered gave a positive reaction, showing that the infants are not infected when born. By applying the test in tuberculous families it may be possible to detect the onset of tuberculosis in its readily curable stage, before other clinical signs become manifest. Negative findings show the freedom from tuberculosis of children from tuberculous families whom it is desired to board out in country homes free from tuberculous infection. Children giving a positive reaction can be placed at once in a suitable sanatorium. The test will also confirm the cure of patients under treatment for surgical tuberculosis. Calmette's experience suggests that after such a cure the individuals are henceforth protected against the ordinary forms of the disease. The ocular test will also serve to weed out from the teaching force persons already infected, turning them aside to some occupation less dangerous for others. It will also reveal incipient tuberculosis in recruits, and in various ways in hospitals, schools, families, etc., the ocular test is destined, he thinks, to prove an important aid in detecting and thus allowing early treatment and other measures which otherwise could not be applied until the disease had reached a much more advanced stage. More than 10,000 applications of the test to date have demonstrated its harmlessness and the certainty that a positive reaction means an active tuberculous process somewhere in the organism. All tuberculous persons do not give a positive reaction, but when it occurs it can be relied on. A positive reaction has been observed in certain typhoid patients, and if this finding is confirmed it suggests, he adds, that there may be some connection between the presence of a few tubercle bacilli in the mesenteric glands and the typhoid infection of these glands and thence of the entire organism by the typhoid bacillus, which is a normal inhabitant of the intestine in a number of healthy persons. This suggests further that the typhoid bacillus may be virulent only for individuals already bearing tuberculous lesions in their lymphatic system. He urges research to determine this question, especially inoculation of guinea-pigs with scraps from glands taken from cadavers of typhoid patients who gave a positive response to the ocular instillation of tuberculin during life. In the discussion that followed at the next session Delorme protested most energetically against applying the tuberculin test in any form to recruits. In case of incipient tuberculosis, the open-air life of the military service is the best means of cure, while a positive diagnosis would alarm the recruits unnecessarily. The ordinary tuberculin test has been dropped in Germany and France for these reasons. In conclusion he cited 39 cases of excessive conjunctival reaction.

39. Present Status of Cholera.—Chantemesse and Borel give diagrams which show the remarkable coincidence of epidemics of cholera at Mecca with the pilgrimages in midwinter and midsummer. The Mohammedans reckon time by the lunar month and thus the date for the pilgrimage is eleven days earlier each year. The forty days' caravan trip and the sanitary surveillance at the embarking points have hitherto kept the epidemics from spreading from Mecca to any extent, but the completion of the new railroad from Asia Minor by way of Damascus to Mecca is bound to revolutionize conditions in regard to the spread of cholera. The railroad is completed now two-thirds of the way from Damascus to Mecca, and will probably be finished before the close of the year. It will have branches down to the coast towns, so that the opportunities for the spread of epidemic disease will be multiplied immensely. Chantemesse remarks that if Mohammed had selected the Julian instead of the Jewish calendar he would have saved the country from cholera and spared his people incalculable misfortunes, as when the pilgrimages occur in spring or fall no epidemics have been observed in the past. Official advices state that between December 13 and January 10 2,260 cases of cholera, with 1,690 deaths, occurred in the Hedjaz—a strip of land along the east coast of the Red Sea where Mecca is situated. All this territory belongs to Turkey. They remark in conclusion that next summer cholera will probably prevail in Syria, in the Black Sea region and in Russia, at least, and that the stream of emigrants passing across Europe on the way to America is liable to scatter infection broadcast unless vigilance is redoubled.

Presse Médicale, Paris.

January 25, XVI, No. 8, pp. 57-64.

41 Protection of Infancy. (Puériculture à Lille.) V. Bué.
42 *Hard Paraffin for Correction of Nasal Defects. R. Leroux.
43 Combined Tongue Depressor and Lamp. (Abaisse-langue éclairant.) P. Desfosses.

January 29, No. 9, pp. 65-72.

44 *Paratyphoid Bacilli and Paratyphoid Affections. J. Courmont and C. Lesieur. Id. G. Fischer.
45 *Alcoholism and Insanity. Legrain.

42. Paraffin Prothesis for the Nose.—Leroux has been much pleased with the immediate and remote results of injection of a very hard paraffin, not melting below 172 F., to correct defects in the frame of the nose. He heats the paraffin until it softens and then takes it up in a sinusitis trocar and pushes it with the guide into the desired place. The main point is to prepare a cavity of exactly the proper shape and size for the reception of the paraffin; this is done with a fine bistoury and spatula.

44. Paratyphoid Bacilli and Paratyphoid Infections.—The articles by Lesieur and Fischer comment on the unscientific term "paratyphoid," which, they state, should be banished from the literature with all similar "para" or "pseudo" appellations for diseases or affections. The trouble is really a "paradiagnosis" or "pseudodiagnosis" when such vague and conflicting terms are applied. In paratyphoid, they say, there is nothing to suggest typhoid fever, either bacteriologically or clinically. The diagnosis should be based on examination of the blood, as the agglutination test is frequently misleading.

45. Alcoholism and Insanity.—Legrain compares conditions in Italy and France, the statistics in Italy showing that during the period from 1903 to 1905 in 10 per cent. of the 38,764 insane patients admitted to 43 out of the total 49 insane asylums in the country alcoholism was directly responsible for the insanity. In 36 per cent. alcohol was a known cooperating factor, and its share in a still larger proportion was probable. The mortality in the alcoholic cases was about 10 per cent. The statistics in France are not collected with sufficient uniformity for direct comparison, but the general proportion of insane from alcoholism is cited at 13.6 per cent.

Semaine Médicale, Paris.

January 29, XXVIII, No. 5, pp. 49-60.

46 *Jaundice with Destruction of Red Corpuscles. (Les ictères hémolytiques.) A. Chauffard.
47 Differential Diagnosis of Spring Conjunctivitis.

46. Hemolytic Jaundice.—Chauffard presents evidence to demonstrate the peculiar fragility of the red blood corpuscles

in certain cases of jaundice and the necessity for differentiating this condition in order to avoid operating in such cases. The serum and blood plasma are apparently normal, but the bone marrow produces red corpuscles which succumb to some unknown factor. No measure is known which will affect this causal factor. He shows that the "white" and the "yellow" forms of pernicious anemia should be differentiated, as arsenic and bone marrow are liable to give good results, transiently at least, in the "white" form. He has found that it is possible to differentiate hemolytic jaundice by the small size of the red corpuscles and their granulated appearance when blood specimens are dried and stained with the Pappenheim technic without fixing. When the jaundice is due to retention of bile, the red corpuscles are normally resistant and of normal size and free from the granulations noticeable in the hemolytic form. He gives illustrations of the blood picture and sustains his assertions by the results of experimental research and clinical experience, giving an illustrated description of a typical example of hemolytic jaundice.

Archiv für klinische Chirurgie, Berlin.

LXXXV, No. 1, pp. 1-342. Last indexed, Feb. 1, p. 408.

48 *Experiences with Fifty-eight Cases of Suppuration or Gangrene of the Lungs; Forty-five Operations. W. Körte.
49 Primary Otogenic Thrombosis in Jugular Bulb. F. Grossmann.
50 Heteroplastic Formation of Bone in the Kidneys. (Heteroplastische Knochenbildung in Nieren.) E. Liek.
51 *Boilable Catgut, Using Anterior Chamber of Eye for Inoculation Tests. C. F. Heerfordt.
52 Fate of Defectively Healed Fractured Bones, Especially in Children. (Spätere Schicksale difform geheilter Knochenbrüche.) Fritz König.
53 Cysts and Fistulas of the Thyroglossal Duct. S. Erdheim.
54 Lessons Learned from Thirty-one Operations on the Stomach. Improved Technic for Gastroenterostomy. E. Bircher.
55 *Lateral Abdominal Hernia. Pseudohernias. (Seitliche Bauchhernien.) R. von Baracz.
56 *Serologic Research on Cancer, Especially from Surgical Standpoint. G. Kelling.
57 Etiology of Noma. A. D. Pawlowsky.
58 *Ascarides Affections in Surgery. H. Miyake.

48. **Operative Treatment of Suppurative and Gangrenous Processes in the Lungs.**—Körte's experience with 58 cases of this kind has convinced him that acute suppuration in the lungs, without putrid decay or formation of sequesters, should be treated for a few weeks with internal measures. If the process then shows no signs of subsidence, and if fever persists, pneumotomy should be done without delay. The prospects are especially good in this class of cases. Acute gangrene in the lung should be treated as soon as possible by extensive opening up of the process and splitting the lung. He does not advocate operating on a bronchiectatic cavity unless it is restricted to a single lobe of the lung. In this case extremely radical measures are required: extensive resection of the thorax, extensive slitting and, if the process does not promptly heal, isolated flaps of lung tissue should be resected. The general condition and whether the focus is single or multiple are the main factors in the ultimate outcome. Twenty of the 28 patients operated on for gangrene and abscess in the lung are still in good health, including 10 who were operated on more than four years ago. In three instances sudden death occurred during the operation, evidently, he thinks, due to reflex action from some branch of the vagus. The fatalities with bronchiectasia demonstrate anew the rarity of cases in which conditions are favorable to operation. Only five such patients recovered out of 17 operated on. He did not use the air cabinet for under or overpressure in any case, and is inclined to doubt whether the overpressure might not predispose to aspiration of pus into the sound parts of the lung or into the sound lung during an operation. Pneumothorax can be avoided by drawing the lung forward with forceps after a small incision has been made in the pleura. He found adhesions in all but 11 of his 42 pneumotomies. His mortality was 28.5 per cent. of 29 cases of gangrene and abscess, and 73.3 per cent. of 17 cases of bronchiectatic cavities. All but 13 of the total 58 were men or boys; the majority were between 20 and 50 years old. Four children between 4 and 19 were cured, although their lesions were extensive. The oldest patient who recovered was 65.

51. **Catgut that Can Be Boiled.**—Heerfordt thinks that nothing can compare with the anterior chamber of the eye for testing catgut. He draws the catgut through the anterior chamber of the eye of a rabbit, cutting off both ends as they project through the cornea. The results of these experiments showed that none of the methods of sterilizing catgut in vogue are thoroughly reliable, and that there is urgent need for some official establishment where catgut can be prepared under the strictest scientific guarantee as to its sterility. While waiting for this he has found the most reliable method of sterilization to be impregnation with formaldehyd, leaving the catgut for from twelve to sixteen hours in a 4 per cent. solution of formaldehyd. The formaldehyd is then removed by rinsing in 5 per cent. ammonia water. Catgut thus prepared can be boiled without injury for ten or twenty minutes just before using, and this treatment does not affect its absorption in the tissues. The catgut must be stretched during the boiling and it is rolled on a special suture holder for this purpose and is threaded into the needle beforehand. He believes that this "boilable catgut" (Kocheatgut) is a great improvement in the line of a reliable suture material that can be used safely even in the eye.

55. **Lateral Abdominal Hernia.**—von Baracz reports a case of abdominal hernia into the right side evidently the result of paralysis of the muscles from an acute anterior poliomyelitis. In an earlier, similar case there had also been paralysis of the left leg and paresis of the right. He also gives the summaries of eight similar cases from the literature in which abdominal hernia into the right or left side had followed infantile spinal paralysis. The hernia may be the result of a congenital defect, but as a rule it is due to partial paralysis of the lateral abdominal muscles resulting from acute anterior poliomyelitis. It is not a true hernia, and electric tests will reveal the condition of the muscles. Operative treatment has little chance of success, as it is impossible to cover the defect adequately, the neighboring muscles generally sharing in the paralysis. Only in case of a small, circumscribed congenital defect it might be possible to remedy the condition with a muscle plastic operation. Under other conditions intervention must be restricted to supplying suitable trusses or girdles, with appropriate treatment of the concomitant paralysis of the leg.

56. **Serologic Research on Carcinoma, Especially from the Surgical Standpoint.**—Kelling has been studying for more than three years the possibility of diagnosing carcinoma from the patient's serum both with the precipitin test and the hemolytic test, and here states that he has succeeded in determining the presence of cancer even in the absence of conclusive signs of its presence. He asserts that these biochemical reactions unfailingly reveal malignant tumor formation, and that they can thus call for surgical relief in the very earliest stages of cancer. They will also reveal recurrence in its earliest inception. He adds that Bier's method of injection of foreign blood as a means of treating malignant tumors should be specialized, that is, the blood from an animal of the same species as that to which the patient's blood shows the specific reaction should be used for the injection. It is particularly applicable for recurrence after operative treatment. He has applied the tests in 600 cases, the hemolytic in 400 and the precipitin in 200. More than a third of the 600 patients had cancer. In 28 cases the diagnosis of cancer was made solely on the positive response to the tests, and the operation confirmed the diagnosis. He has not much hope of successful serum treatment of primary malignant tumors which generally develop on chronically inflamed tissues. The cancer cells nestle between thick sheets of connective tissue and it is hard to see how the serum can reach and act on these nests of malignant cells. The outlook is different, however, with recurring malignant disease after radical operations. Serum treatment has every prospect of success in this case. He describes the technic of both tests and his findings with each. THE JOURNAL has duly chronicled Kelling's announcements in regard to the origin of cancer from embryonal cells from some other species. He makes the serum for his tests on this assumption, using beef, sheep, pig or poultry livers and extracts of chicken and pig

embryos to prepare the six serums for the precipitin test. The chopped substance is kept in glycerin, macerated, filtered and diluted to one part in one thousand of normal salt solution. One of these six serums becomes cloudy on addition of half the amount of the patient's serum in case of cancer, but never otherwise.

58. **Ascarides Affections.**—Miyake reports from Japan a case of fatal ileus from accumulation of ascarides in a loop of the small intestine in a boy of 8; 83 ascarides were clumped and obstructed the lumen completely. In another case, an ascaris 9 inches long in the gall bladder simulated a gallstone affection in a young man. In another young man numerous ascarides colonized in the abdominal wall, causing an abscess from which 30 ascarides were discharged in the pus, and others came later. In this case the worms had evidently perforated through a tuberculous abscess, and he adds that the stools should be examined carefully for worms in every case of tuberculous peritonitis, and if such are found, a course of medication to expel them is urgently indicated.

Centralblatt für die Grenzgeb. der Med. u. Chir., Jena.

January 22, XI, No. 1, pp. 1-48.

59 *Inflammation of the Omentum. (Epiploitis.) O. Lederer. Collective Review of the Literature Since 1900.

59. **Inflammation of the Omentum.**—Lederer comments on the more conservative tendency evident in the writings on this subject during the last few years. Formerly, pseudotumors in the omentum were operated on without fail, but the discovery that even extensive inflammation in the omentum is liable to subside if the patient is put at rest and compresses applied justifies more conservative treatment. Diagnosis of inflammation of the omentum alone is no longer treated surgically, unless the pseudotumors compress the intestine or suppuration causes fever. The fatal cases noted were all of postoperative inflammation, death occurring during or soon after the second operation that became necessary.

Deutsche medizinische Wochenschrift, Berlin.

January 23, XXXIV, No. 4, pp. 137-176.

60 *Hemisystole. (Hemisystolie.) E. von Leyden.
61 Bacteriolytic Property of Lecithin. R. Bassenge.
62 *Experiences with Antimeningococcus Serum. E. Levy.
63 *Technic and Actual Value of Tendon Transplantation in Treatment of Spinal Paralysis in Children. (Sehnenüberpflanzung bei spinalen Kinderlähmung.) Vulpius.
64 *Intraperitoneal Rupture of Bladder. (Ruptur der Harnblase.) O. Nordmann.
65 *Placenta Prævia. R. Freund.

60. **Nonsynchronous Contraction of the Two Ventricles.**—von Leyden adds a fourth to the number of cases of "hemisystoly" which he has published, and discusses the mechanism of the anomaly. He explains them by the myogenic theory, although he thinks that there are probably functioning nerve fibers in the left ventricle. The foundation for the hemisystoly is an exceptionally pronounced insufficiency of the mitral valve and enlargement of the orifice. As the ventricle fills and the heart contracts, the resistance on the side toward the aorta is greater than that toward the auricle and the blood is forced back into the auricle under full pressure. It is even driven back into the pulmonary vein, reversing the current of the blood flowing naturally into the left auricle. The pulse in the arterial system is thus very small, but during the diastolic pause the blood returns into the left heart. The right ventricle contracts and expels the blood, but it does not reach the left ventricle, and the latter does not contract, as it has no blood in it. Not until the second contraction of the heart does the blood pass into the arterial system. The left auricle in these cases is always much enlarged, while the left ventricle is scarcely enlarged at all.

62. **Antimeningococcus Serum Treatment of Epidemic Cerebrospinal Meningitis.**—Levy reports a mortality of over 78 per cent. in 14 cases not treated with the serum, while the mortality was only 21.74 per cent. in 25 serum-treated cases, and only 11.76 per cent. in 17 cases in which the serum was injected by lumbar puncture. He is convinced that the latter technic has a promising future. The disease became so modified immediately after the injection that it seemed like another type, and the complications were mild, if any appeared. No by-effects were observed from the lumbar technic, even when unusually large doses were administered. He injected 20 c.c. in children and from 30 to 40 c.c. in adults, using the serum produced at the Institute for Infectious Diseases at Berlin.

63. **Tendon Transplantation for Infantile Spinal Paralysis.**—Vulpius reports 50 per cent. extremely satisfactory and 30 per cent. satisfactory results in his numerous cases of tendon transplantation for spinal paralysis in children, although he says that it is impossible to give classified statistics, as each case is a law unto itself. Failures are due to too early operating—the first year after the onset of the paralysis is too soon—or there may have been some blunder in the technic or after-treatment, or the plan of operation may have been unwisely selected. On the other hand, durable results have been obtained both on the arms and legs in long series of cases with partial or total transplantation, using functionally allied substituting muscles or antagonists. Very extensive paralysis should not be treated in this way, but requires arthrodesis.

64. **Intraperitoneal Rupture of the Bladder.**—Nordmann calls attention to the reflex stiffening of the abdominal wall as the most important symptom of intraperitoneal rupture of the bladder, in connection with desires to urinate which do not bring any urine. After the laparotomy, if the bladder suture holds and there is no suppurative peritonitis and the intestines are not much distended, the abdominal cavity can be sutured after cautious rinsing with salt solution. The bladder wound should never be tamponed. On suspicion of rupture of the bladder the patient should be placed in the hands of a surgeon who alone should catheterize the patient to confirm the diagnosis, very cautiously and only once. After operating, a retention catheter should be left for a week and the bladder should be rinsed out once or twice a day, and internal medication used to avert cystitis. He reports a case personally observed and reviews the literature on the subject.

65. **Placenta Prævia.**—Freund thinks that the division of the uterus into three segments is necessary for comprehension of the physiologic and pathologic features of childbirth, especially of placenta prævia, as he describes in detail with diagrams. In treatment of placenta prævia he preaches the necessity for absolute bed rest, in case of moderate bleeding, with strict clinical supervision. The vagina should never be tamponed except as a last resort, and only when the patient is to be transported to the maternity. In case of profuse hemorrhage, with the cervix still undilated, he advises firm tamponing of the entire vagina with sterile moist gauze for a few hours. In case of profuse hemorrhage with the cervix passable, he refrains from tamponing, but ruptures the amniotic sac and waits; if the sac is out of reach, the child viable and the mother in good condition, he introduces the inflated rubber bag and then awaits spontaneous delivery or does version according to indications. The metreurynter should not be left longer than four hours, and in case it fails to relieve or the child is non-viable or the mother in a threatening condition, he does version and then waits. In case of hemorrhage persisting after the legs are drawn down, he pulls with moderate, continuous traction, stopping with each labor pain and as the breech forces its way through. Extraction should be done only with the os completely dilated. In case the os still seems too narrow, it may be cautiously stretched, allowing access of air to the child. Cesarean section should not be done outside of a hospital, and there mainly as a prophylactic operation.

Deutsche Zeitschrift für Chirurgie, Leipzig.

December 1907, XCI, Nos. 3-4, pp. 197-432.

66 Clinical Study of Malignant Tumors of the Thyroid. (Bösartige Geschwülste der Schilddrüse.) T. Kocher.
67 Origin of Intestinal Actinomycosis. E. Schümann.
68 Subcutaneous Laceration of Tendons in the Fingers. (Sehnenzerreissungen.) C. Schlatter.
69 Intratracheal Goiter. (Intratracheale Strumen.) H. Meerwein.
70 Radical Operation for Umbilical Hernia. (Nabelbrüche.) P. Esau.
71 Mesenteric Cysts. S. Kostlivy.
72 *Histologic Study of Bone Transplantation in Man. (Knochentransplantation.) Axhausen.
73 Case of Volar Luxation of Ulna. M. Haedke.

72. **Fate of Transplanted Bone.**—Axhausen had opportunity to examine the amputated leg of a young man fifty-one days after an extensive defect in the metatarsus had been filled with a piece of bone taken from the anterior aspect of the tibia. The graft had healed rapidly in place and histologic study of the tissues later showed that there can be no doubt that fresh bone tissue implanted in a defect dies throughout, but the periosteum remains alive and capable of reproducing bone tissue; and it is probable that the bone marrow retains its vitality. The implanted dead piece of bone gradually is supplanted by new formed bone tissue. The new bone is formed from the implanted periosteum and possibly also from the bone marrow and from the adjacent tissues if they are capable of producing bone. When macerated bone is implanted, only the last mentioned factor can carry on the process of new bone growth, and this only when the tissues are capable of bone production as in case of trephining and resection in solid walls —but not when implanted in place of large defects in the long bones. Under these circumstances fresh bone still covered with its periosteum is much to be preferred. He suggests that bones taken from children's cadavers might answer the purpose admirably. Tomita comes to practically the same conclusions as the result of extensive experiments on young rabbits and dogs (see No. 95 below). He found, however, that the implanted bone retained some vitality as late as the ninety-fifth day, and that it was not entirely destroyed until about 110 or 130 days after the implantation. This long retained vitality aids in the healing-in process, the piece soon growing into connection with the environing tissue. The bone cells do not possess the property of forming new bone—this is exclusively the prerogative of the periosteum and bone marrow, which should, therefore, be carefully preserved when implanting bone.

Medizinische Klinik, Berlin.

January 12, IV, No. 2, pp. 39-76.

74 *Meningitis or Meningism. N. Ortner.
75 Cracking Sounds in the Scapula. (Skapularkrachen.) Lotheissen.
76 *Hot Gelatin Enemas in Intestinal Hemorrhage. (Heisse Gelatinklystiere bei Darmblutungen.) E. Michaelis.
77 *Treatment of Exophthalmic Goiter by A. von Strümpell, Eulenburg, and Eichhorst. (Morbus Basedowii.)
78 Study of the Cutaneous Reaction to Tuberculin. (Impfpapel bei der Tuberkulosediagnose nach v. Pirquet.) F. Daels.

January 19, No. 3, pp. 77-110.

79 *Diagnosis by Palpation, Gymnastic Exercises, Massage, Etc. (Mechanodiagnostik.) A. Bum.
80 *Polycythemia. R. Stern. Commenced in No. 2.
81 Cutaneous and Ocular Reactions to Tuberculin in Adults. (Kutan- und Ophthalmoreaktion.) H. Curschmann.
82 Conservative Treatment of Inflammatory Affections of Adnexa and Pelvic Connective Tissue. (Was leistet die konservative Behandlung?) A. Hörrmann.
83 Catalysis in Relation to Medicine. H. Schade. Commenced in No. 2.

74. **Differentiation of Meningitis.**—Ortner reviews the various affections liable to induce symptoms on the part of the meninges and enumerates the differentiating points. Examination of the blood, cerebrospinal fluid or of a scrap of muscle will differentiate malaria, anthrax, trichinosis or other infections; the main point is to think of the possibility when confronted with a syndrome suggesting meningitis. Early paralysis will sometimes differentiate acute encephalitis. Thrombosis of the transverse sinus may be differentiated by the edema over the mastoid process, the only partial filling of the external jugular vein on the affected side, the twisting of the head toward that side, and the tenderness to pressure of the inner margin of the sternocleidomastoid muscle. This tenderness is due to descending phlebitis of the internal jugular vein and is thus a companion to the external jugular vein sign. Sarcomatosis, carcinosis and cerebral echinococcus cysts may induce meningeal symptoms, but the absence of fever and the findings in the spinal fluid readily differentiate them. In one case, a hard drinker with a subfebrile tuberculous process in one lung and cirrhosis of the liver with enlargement of the spleen suddenly presented symptoms of supposed incipient tuberculous meningitis with increasing delirium. On suspicion of possible delirium tremens large doses of chloral were given, soon followed by subsidence of all the meningitic symptoms. In another case the cerebrospinal fluid was clear, but the other symptoms indicated meningitis, possibly of typhoid origin, as the abdomen was soft and there was some meteorism, with diarrheic stools. As the agglutination test gave constantly negative results and the respiration and pulse became rapid with increasing cyanosis, the diagnosis was corrected to miliary tuberculosis with tuberculous meningitis, but autopsy confirmed the first assumption of typhoid meningitis. Ortner has encountered but one instance of diarrheic stools with tuberculous meningitis. Meningeal symptoms from lead poisoning are readily differentiated, as a rule.

76. **Hot Rectal Injections of Gelatin to Arrest Intestinal Hemorrhage.**—Michaelis reports the successful arrest on two occasions of severe typhoid intestinal hemorrhage by rectal injection of a 5 per cent. solution of gelatin, one liter being injected at a temperature of 50 C. (122 F.) in four portions. The procedure was repeated the next day when the hemorrhage recurred. The fine results in this case encouraged further trials, and 11 other typhoid patients with intestinal hemorrhage were treated with rectal injections of a 5 to 20 per cent. solution of gelatin at temperatures ranging from 115 to 122 F., in amounts of 250, 300, 500 c.c. up to one liter, from two to four times a day. The hemorrhage was completely arrested by this measure in every instance. Not a trace of injury to the intestines from the injections could be detected in any case, even in those that came to autopsy. The hot gelatin cured the hemorrhage in some cases after failure of all other measures. The foot of the bed was raised and the fluid was injected very slowly and under low pressure to avoid inducing a desire for defecation. This measure also proved successful in a case of recurring intestinal hemorrhage of unknown cause in a young woman. An exploratory laparotomy failed to clear up the diagnosis, but after a week of two daily injections of the hot gelatin solution not a trace of blood could be discovered in the stools, and she rapidly regained weight and strength. A child with hemorrhagic stools for a few days was also cured in three days with injection of 1,000 c.c. of the hot gelatin, fractioned.

77. **Treatment of Exophthalmic Goiter.**—von Strümpell lays the greatest stress on the regulation of the diet. Complete mental and physical rest, fresh air rest cures and artificially carbonated baths and electricity are all valuable adjuvants. He gives iron and arsenic in anemia and emaciation, bromids in case of much nervousness, valerian or exceptionally digitalis when the heart disturbances are distressing. In many cases of the so-called "goiter heart," which can scarcely be distinguished from the latent forms of exophthalmic goiter, he has found ergot useful. He has never witnessed any objective benefit from the serum of thyroidectomized sheep, but the patients are often subjectively much benefited by it. He tells of several fatalities following operative treatment; in certain other cases no objective improvement can be detected. At the same time he knows of several cases with successful results of operative measures and he would certainly operate in severe cases after failure of all other measures. Eulenburg echoes Strümpell's remark that treatment can be only symptomatic as no specific treatment is yet known. He has given the serum of thyroidectomized sheep in 17 cases and never observed any ill effects nor any important and permanent benefit. Even at the best, the goiter was only slightly reduced in size, with transient improvement of the cardiovascular symptoms. He has noted considerable improvement in the general health after a course of treatment with nerve tonics. The resisting powers must be adequate and the local symptoms very serious, he asserts, to justify operative interference. Eichhorst regards physical and dietetic measures as the principal reliance in the treatment of exophthalmic goiter. Rest for mind and body is the main point. Remaining in bed may give good results without other measures. He orders a warm bath for fifteen minutes daily, and has obtained surprisingly excellent results from a change of air, especially a sojourn in the mountains. His experience with the serum of thyroidectomized sheep was entirely negative; it did neither harm nor good, and his experience with Roentgen treatment was the same. If no benefit is apparent after three months of internal treatment, he pro-

poses surgical intervention without making any promises on its behalf, although he knows of a number of patients who have been permanently cured by it.

79. **Diagnosis by Behavior of Muscles and Joints, Massage, Etc.**—Bum comments on the prevalent disregard of the information to be learned from gymnastic exercises and palpation. It requires a knowledge of the laws regulating the mechanism of the muscles and joints, and also skill in palpation, but aside from this no instruments or appliances are needed for this "mechano-diagnostics," as he calls the science. The tough doughy consistency of rheumatic muscles, the small intramuscular extravasation after rupture of muscle fibers, the discovery of infiltration in the muscle, the relics of circumscribed inflammation in the muscle, which may be the cause of a reflex neuralgia—all these findings may have great differentiating importance, as also the discovery during palpation of inflammatory processes in the genitalia or appendix. In case an individual claims that his arm is paralyzed after an injury to the shoulder, if the arm is passively raised to a level with the head and the individual is told to bring his arm down slowly, and does so, this is a proof of malingering; in true paralysis the arm drops when released. He cites a number of other points useful for detecting simulation, among them his observation that the thumb is always abducted when the individual pretends that he is unable to close his fist. The hand closes naturally with dorsal flexion and palmar flexion suggests malingering, as also the way in which the individual holds the neighboring joints stiff with the assumed ankylosed joint instead of showing the natural vicarious action of the neighboring joints.

80. **Polycythemia.**—Stern analyzes the autopsy findings in the ten cases of polycythemia that have been published; nothing has been found special to the symptom-complex of polycythemia with enlargement of the spleen. Polycythemia seems to be a symptom of several different morbid conditions and may last for years without appreciable disturbances. The urine frequently contains albumin and tube casts when there is considerable enlargement of the spleen, but this finding does not seem to have the same significance with polycythemia as under other conditions. The condition may persist for years without threatening signs of kidney disease, although contracted kidney was observed in some of the cases on record. Venesection has proved useful and measures for treatment of the frequently coexisting arteriosclerosis and nervousness. Some of the patients do well on a milk and vegetable diet, with only a little meat once a day.

Monatschrift für Geburtsch. und Gynäkologie, Berlin.

January XXVII, No. 1, pp. 1-186.

84 Structure of the Uterine Mucosa with Special Regard to Menstruation. (Bau der Uterusschleimhaut.) F. Hitschmann and L. Adler.
85 Case of Simultaneous Ectopic and Uterine Pregnancy. Recovery After Operation at Second Month. (Gleichzeitige Schwangerschaft innerhalb und ausserhalb der Gebärmutter.) T. Immel.
86 *Gonorrheal Ophthalmia Acquired in the Uterus. (Intrauterin erworbene Ophthalmoblennorrhoe des Neugeborenen.) E. Holzbach.
87 Fibrosarcoma Developed from Side of Ovary. H. Hellendall.
88 Papillary and Colloidal Adenocarcinoma of Female Urethra. R. Puppel.
89 Present Status of Theories in Regard to Absorption of Bacteria. (Bakterienresorption.) O. Roith.

86. **Intrauterine Gonorrheal Infection of the Eyes.**—Holzbach reports a case in which the child of a woman with gonococci in the birth passages was born with evidently fresh ulcerations in the cornea of both eyes; gonococci could be cultivated from the conjunctival secretions. The literature contains a number of similar cases which he summarizes. Comparison of these cases shows that this congenital gonorrheal infection probably occurred from some rupture in the bag of waters allowing access to the germs. The eye seems to offer particularly favorable conditions for infection when the membranes fail to protect the fetus against the invasion of the amniotic fluid by the gonococci. The eye may show actual maceration from the effect of putrefying amniotic fluid, even with a living child. Intrauterine gonococcus infection of the eye seems to be merely a contact infection, and the danger is greater the earlier the bag of waters is ruptured and when the birth is prolonged from any cause. Under such circumstances special attention should be paid to prophylactic measures. There do not seem to be any means of preventing this uterine infection altogether.

Virchows Archiv, Berlin.

January CXCI, No. 1, pp. 1-170.

90 Intravasation of Anthracotic Pigment into the Blood Vessels of the Lungs. S. Ohkubo.
91 Fate of Fetal Atelectasis. O. Lotmar.
92 Influence of Fatal Burning on the Histologic Picture of the Thyroid. (Einfluss letaler Verbrennungen auf das histologische Bild der Schilddrüse.) F. Valentin.
93 Accumulations of Parathyroid Cells in the Thyroid. (Intrathyreoidal gelegene Zellhaufen der Parathyreoidea.) L. Michaud.
94 Stenosis of Rectum from Metastatic Carcinoma with Simultaneous Myeloma Inducing Metastasis. H. Toyosumi.
95 *Experimental Research on Transplantation of Bone (Knochentransplantation.) C. Tomita.
96 The Question of Regeneration of a Peripheral Nerve Stump Permanently Separated from Its Center. A. Margulies.
97 Morphologic Changes in the Spleen After Infection of Passively Immunized Animals. (Veränderungen in der Milz, etc.) A. Jarotzky.
98 Measurement of the Vessels and Arteriosclerosis. (Gefässmessungen und Arteriosklerose.) O. Scheel.
99 Senile Changes in the Ganglion Cells in the Brain. (Altersveränderungen der Ganglienzellen im Gehirn.) M. Mühlmann. Id. von Hansemann.

95. See abstract No. 72.

Hospitalstidende, Copenhagen.

November 13, L, No. 46, pp. 1217-1240.

100 Cesarean Section Postmortem with Living Child. E. Høeg.

November 20, No. 47, pp. 1241-1264.

101 Epidemic of Microsporon Alopecia in Children. (Mikrosporie Epidemi.) H. Bang.

November 27, No. 48, pp. 1265-1300.

102 *Multiple Myeloma. C. Permin. Commenced in No. 47.

December 4, No. 49, pp. 1301-1332.

103 Case of Hysteric Lethargy. K. Malling.

December 11, No. 50, pp. 1333-1356.

104 *Otogenic Osteomyelitis of Parietal Bones of the Skull. J. Møller.
105 Retractor for Use in Extirpation of Lachrymal Sac. (Saarhage til Taaresaeksexstirpation.) Killerich.

December 18, No. 51, pp. 1357-1380.

106 Perineal Prostatectomy. D. Nordentoft.

January 1, LI, No. 1, pp. 1-24.

107 *Temporary Osteoplastic Resection of Chest Wall for Chronic Empyema in the Pleura or Abscess in Lung. T. Rovsing.

January 8, No. 2, pp. 25-48.

108 *Importance of Esophagoscopy and Tracheoscopy for Diagnosis and Treatment. E. Schmiegelow.
109 Annular Syphilid at the Margin of Cicatrix from Primary Sore. (Annulat Syphilid i Randen af Arret efter Indurationen.) L. Nielsen.

102. **Multiple Myeloma.**—Permin remarks that there are only about forty cases of myeloma on record, but he thinks that the condition is in reality more common than this would indicate, and reports three cases from his own experience. The first patient was a man of 60 who was in the hospital for six months on account of pains in the chest. The pains then subsided for two or three months and then recurred, very severe under the left scapula. Signs of myelitis also developed and death occurred suddenly from embolism in the pulmonary artery. The lower dorsal vertebræ were found studded with small nodules and one vertebra was entirely transformed into a tumor. In the second case several vertebræ had been destroyed and the bone tissue was substituted by a tumor mass with the same characteristics as in the first case, that is, composed of cells resembling myelocytes. The third patient was a man of 50 with pains suggesting sciatica for some time, but finally subsiding. Five years later pains and oppression in the chest were noted and increased for two years, when a tumor simulating an abscess developed near the articulation between sternum and clavicle, with tenderness in the lumbar region, destruction of several dorsal and lumbar vertebræ and substitution of the bone by cells resembling myelocytes. There were also tumors in the sternum and in two ribs. The age, the spinal symptoms, and the manifestly primary myelomas in the vertebræ were strikingly alike in the three cases, as also the total absence of any lesion or growth in the other organs. In one case there was an evident encroachment of the myeloma on the adjacent vessels, which suggests a tendency toward

malignancy. Another case is described in which multiple tumors at various points of the skeleton suggested myelomas. The urine gave a pronounced Bence-Jones reaction for albumose. Fever was occasionally noted and the macroscopic findings at autopsy also suggested myeloma. The microscope, however, differentiated the tumors as multiple sarcomas.

104. **Otogenic Osteomyelitis of Flat Bones of Skull.**—Moller reports a case and reviews fifteen others from the literature, remarking on the rarity of this affection when circumstances seem so often to favor it. In eleven cases the osteomyelitis developed in connection with acute otitis. In some cases the process was discovered early, but in others it dragged along for months or years, with intervals of latency. It is always a serious affection, but instances of recovery are known. The process may flare up again months after it is supposed to have been entirely cured, or a new focus may develop elsewhere. The defect left in the skull heals over, as a rule, especially in children, if the periosteum is preserved. Laurens has seen even very large defects heal over in time. In some cases the process was restricted to the temporal bone, but in others it extended to the occipital or involved all the flat bones of the skull to some extent. When not sure that sound tissue has been reached, in excising the focus, Schilling makes an artificial demarcation by cutting a furrow down to the dura in the assumed sound tissue all around the defect left by excision. The patient in the case reported was a girl of 5 with otitis media and mastoiditis. After the mastoid operation the temperature remained high and continued to rise until a secondary osteomyelitic focus was discovered and cleaned out, when the patient recovered and has had no recurrence during the year since. Certain symptoms had suggested meningitis, but lumbar puncture showed the fluid clear. In one case on record the process induced epileptiform attacks, in certain others it ran an almost symptomless course. The aspect of the bone is unmistakable.

107. **Temporary Osteoplastic Resection of the Chest Wall.**—Rovsing gives an illustrated description of a case of chronic empyema of the lung, which had much reduced the patient during the eight years since symptoms on the part of the lung first attracted attention. The empyema had constantly recurred notwithstanding an operation which included resection of the eighth rib. Rovsing cut a U-shaped flap extending from the spine of the scapula down to the eighth interspace. The lowest part of the flap was 12 cm. wide, forming a rounded rectangle. This allowed ample access and rendered it easy to mobilize the lung and tampon the pleural cavity with gauze medicated with silver nitrate, over which the flap was replaced but not sutured. The operation was done under ether, and afterward the patient lay on the operated side. The temperature dropped at once to normal and the secretion of pus stopped as if by magic. The tampon was gradually removed and the flap restored to place, which was easily done, thanks to the precaution of resecting about 1 cm. of each end of each rib when the flap was first cut. The patient was in perfect health four months after the operation with full earning capacity restored and only a linear scar left from the operation. The shape of the thorax was not altered in any way. Rovsing has also applied this technic of temporary resection of a large flap of soft parts in the exploration and treatment of a deep-lying abscess in the lung of a man of 43, the results being equally good in this case. He regards this technic as signifying great progress in operations on the lungs, allowing ample oversight of conditions and the best prospects for treatment and drainage. It is almost impossible for an abscess to escape discovery.

108. **Importance of Esophagoscopy and Tracheoscopy for Diagnosis and Treatment.**—Schmiegelow reviews his experience with these measures during the last year or so, citing examples of the great benefits of direct visual inspection. In one case, a young man presented symptoms suggesting obstruction at the cardia, but the esophagoscope showed a bleeding new growth which escaped observation at the first application of the esophagoscope. It proved especially useful in differentiation of cancer in the stomach or esophagus, spastic stricture, dilatation or diverticulum of the esophagus and foreign bodies. Important information was also derived in a case of stenosis of the trachea from pressure of a substernal goiter, showing the necessity for removal of the goiter which was successfully done—the disturbances had previously been ascribed to nervousness. In another case stenosis of the trachea in a child was seen to be due to perforation of a tuberculous bronchial gland into the trachea. The débris was removed through the tracheoscopy tube and respiration became normal, while microscopic examination of the scraps confirmed the diagnosis. In another case stenosis of the right bronchus was traced to a syphilitic gumma. A grain of corn was removed from the bronchus of a child with the aid of the bronchoscope, but severe cocain poisoning followed to which the little patient succumbed.

Gazzetta degli Ospedali, Milan.

January 19, XXIX, No. 8, pp. 73-88.

110 Case of Puerperal Endocarditis with Thrombophlebitis of Left Subclavian. Recovery. S. Radaeli.
111 *Splenomegaly with Cirrhosis of Liver. (Morbo di Banti.) F. Schupfer.
112 Diplococcus Lanceolatus Meningitis Following Fracture of Base of Skull. A. Balduzzi.
113 Renal Pyorrhea During Pregnancy. G. Baroni.
114 *Determination of Hemoglobin and Iron in Blood. (Ematimetria con metodo decolorante e con il ferrimetro modificato.) E. Debenedetti.

111. **Splenectomy for Splenomegaly with Cirrhosis of the Liver.**—Schupfer reports a case of Banti's disease, treated by removal of the spleen; he believes that in this condition the spleen is the organ primarily at fault. The patient was a man of 42, and three years after the operation he was in good health, the previously much enlarged liver being reduced to nearly normal size. Before the operation the large mononuclears were found in normal proportions, but three years later they formed from 27 to 37 per cent. of the total. The splenectomy in Schupfer's case evidently improved the condition of the liver and arrested the cirrhosis, but the blood showed three years later from 5,780,000 to 6,270,000 reds, with cyanosis of the hands and ears now and then, more pronounced when the patient stood or when he was exposed to cold. The heart was normal and the hyperglobulia was general and constant. In most cases the number of reds is at the lower range of normal after splenectomy; or merely transient hyperglobulia was observed. To have it occur tardily and especially in Banti's disease is unprecedented, he thinks. The blood did not show nucleated reds, myelocytes or neutrophile leucocytes, but the leucocytes, which numbered 14,000 a month after the operation, three years later numbered between 16,200 and 20,300. He tabulates the blood findings before and late after the operation in this and in six other cases that have been reported. In his case the neutrophile polynuclears ranged from 68 to 78 per cent. before and from 50 to 58.91 per cent. three years later, while the lymphocytes dropped from 17 to 8.90 per cent., and the eosinophiles increased from 2.1 per cent. to 4.28 per cent.

114. **Determination of Hemoglobin and Iron in Blood.**—Debenedetti describes a chemical test for hemoglobin and a modification of the Jolles ferrometer, both of which, he claims, furnish very accurate and simple tests of the proportion of hemoglobin and iron in the blood. He determines the proportion of hemoglobin by the amount of chlorin water required to decolorize the sample of blood. The iron test is based on the property possessed by potassium permanganate of oxidizing the iron in the blood.

Sei-i-kwai Medical Journal, Tokyo.

November, XXX, No. 11, pp. 218-230.

115 *Firearm Wounds of Nerves and Their Plastic Repair. S. Namba.

December, No. 12, pp. 231-242.

116 Typhoid Epidemic on Man-of-War Arrested by Isolation of Two Healthy Bacilli Carriers and Preventive Serum Injections for the Crew. K. Momose.

115. **Plastic Operations of Nerves.**—Namba describes two cases in which radial or popliteal neuroparalysis following firearm wounds was successfully treated by implantation of the sciatic nerve from a cock.